The American Cinematographer

Neal F. Green

September 1930

A Publication for Professionals and Amateurs

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Bell & Howell craftsman using a tool-maker microscope in the inspection of an automatic screw machine circular form tool. This tool is used in making the blanks for the take-up sprockets for Filmo 70-D Cameras. This measuring instrument serves to ascertain the structure of metals and flaws in tools and is used for measurements of gauges, gear teeth, angles and contours. Measurements can be taken to .0001 of an inch

STEEL fingers perforate miles of celluloid ribbon that will be sent to Hollywood to catch the voice and charm of a celebrated actress. In Hollywood, steel fingers move this ribbon past a sensitive camera lens, recording the movements of actors on "location." In a little town in Vermont, steel fingers move this ribbon past a projection lens, and scores of theater-goers thrill to the *life-like* action before them.

The success of this cycle of movie making rests, in great measure, upon the similarity of the steel fingers which perforated the film, those which moved it through the camera, those which moved it through the projection machine. A flaw in the first two sets of fingers would have rendered the last set of fingers clumsy and ineffectual. But there were no flaws, and the movie goes on the screen without a hitch.

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Dear Mr. Rose.

We made our first Harcol Sound pictures this week and they will be released immediately. The reel was composed of four or five different subjects under all sorts of conditions including interiors requiring artificial lights, exteriors under bad lighting conditions and shots in bright sunlight where many men and lots of noise and action were involved. All of the views resulted in not only beautiful photography, but the sound is more uniform and natural than that of any Industrial reel we have ever seen or heard.

The Tanar loop is without doubt a big step forward in sound-on-film recording and we will very soon be ready to order from you an additional Studio unit as well as another portable.

We shall be glad to demonstrate your machine to any prospective customers, as we are busy with it every day now and they can see it in actual operation without our having to make any special set-ups for them.

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By [signature] President.

AH/ED

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Mr Edeson and his 70 mm Mitchell

» » Wide Film

Some Comments on 70 mm. Camerawork

by **ARTHUR**

IF ANYONE had, a few months ago, told me that I would not only be photographing a big picture on wide film, but also rabidly enthusiastic over its artistic possibilities, I would have thought him crazy For I had the typical, conservative cameraman's attitude toward wide film= it might be all right as a novelty, but as a practical medium for serious artistic work it was impossible I could think of too many technical and artistic flaws in it to ever think that it could gain a cameraman's favor Everything—especially the new proportion of its picture—seemed absolutely wrong

Since then, I have spent more than six months photographing the 70 millimeter version of Raoul Walsh's "The Big Trail" In this time I have shot hundreds of thousands of feet of Grandeur film, and the results have convinced me that I, and not the process, was wrong And now that the production is completed, I know that I shall find it difficult, indeed, to return to the cramped proportions of our present-day standard film

For 70 millimeter photography has given me an entirely new perspective Instead of regarding things in the light of the old, cramped, Movietone frame, I now see them, photographically, as my eye naturally perceives them—in much the same proportions as the low, wide Grandeur frame

Technically, 70 millimeter cinematography is much the same as ordinary 35 mm cinematography The cameras are standard Mitchell cameras The film is standard Eastman Type Two Panchromatic The lenses are, in most respects, similar to standard lenses It is in the lenses, however, that the chief technical difference is found, for any given lens will embrace a considerably wider angle of view on the 70 mm film than on the smaller standard Therefore, when, as in this present picture, two versions are to be shot, the 70 millimeter camera must use a lens of approximately double the focal length of the lens used to make a corresponding 35 mm. shot Or, reversing the example, when the cameraman uses a lens of a given focal length, the standard cameraman must use a lens of approximately half that size to make his corresponding shot. The shortest focal-length lens that I used during the making of "The Big Trail" was 50 mm., although 40 mm is claimed to be theoretically the absolute minimum useable However, as this was actual production work, and not laboratory tests, I preferred to play safe, and never used anything below a fifty When I used a fifty on a shot, the standard cameraman would use a twenty-five to produce a corresponding shot on his smaller film, when his shot required a fifty, mine would demand a four inch, and so on In this picture, though the majority of the scenes were duplicated shot for shot, in each size of film (as nearly as was possible), the Grandeur version, being considered the most important, received the greater attention So it was the requirements of the 70 millimeter

Scenes like this, Mr Edeson says call for 70 mm

Cinematography

from a Practical Cinematographer

EDESON, A. S. C.

Edeson with his 70 mm Mitchell and Andriot with his standard on location

cameras that dictated the lenses to be used, the set-ups, action, and all such matters

The selection of lenses for 70 millimeter use is especially important One of the chief photographic complaints against wide-film has been that there was only too often a marked falling off in definition at the extremities of the picture The only cure for this is the use of lenses of the very highest quality—the very best of the best Of course, any cameraman worthy of the name will take great pains in the selection of his lens equipment, but in selecting wide-film objectives, he must take even more extraordinary precautions This naturally means an endless amount of testing before even one lens is chosen, but it is well worth it, for only the best lenses can give perfect Grandeur pictures, and only perfect pictures can reveal the full possibilities of 70 millimeter.

In my own case, when I was assigned to the 70 millimeter camera-work on "The Big Trail," I realized the importance of proper lens equipment, and spent a long time seeking the very finest lenses available—and saw to it that my associates on the picture did likewise When I had finally decided on the particular make of lens that I wanted to use, I had the manufacturers supply me with an extremely large assortment of lenses of every size from which to choose These I tested in every conceivable manner, visually and photographically, I found that the only true indication of their capabilities was their performance in actual photographic tests And even though the lenses I used were the product of what is probably the most efficient and exacting optical firm in the world, I found that I had to test at least ten or a dozen individual lenses to obtain one which met all of my tests perfectly But this trouble and expense was not only amply justified in the quality of the photography which resulted when the picture went into production, but in the fact that I now have as perfect a lens equipment for either 70 mm or 35 mm cinematography as has ever been assembled For these lenses may be used interchangeably on either my 70 mm. Mitchell, or upon my regular 35 mm Mitchell camera

The chief requirements for lenses for wide-film cinematography are, first and foremost, extremely wide covering power; and secondly (and of quite as great importance), extremely great depth of focus Due to the more natural shape of the Grandeur frame, there is a certain pseudo-stereoscopic effect produced but this effect is lost unless there is a very considerable depth of focus in the image The 70 millimeter picture is very nearly the same proportion as the natural field of our vision, which, I suppose, is responsible for this pseudo-stereoscopy But, clearly, to take full advantage of this, we must use lenses which will give us a degree of depth at least somewhat approximating that of our eyes. Therefore, it is

(Continued on Page 21)

Another scene in "The Big Trail" which Edeson says will be improved by 70 mm

BELL & HOWELL
STANDARD CAMERA LUBRICATION CHART

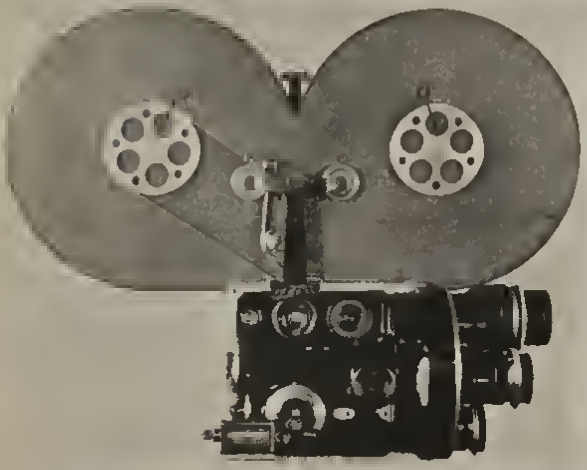

FIG. 1

FIG 2

FIG 3

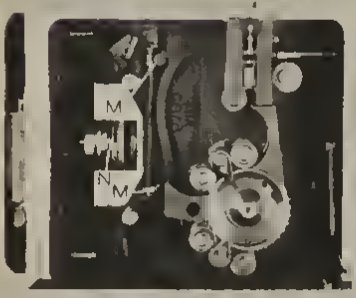

FIG 4

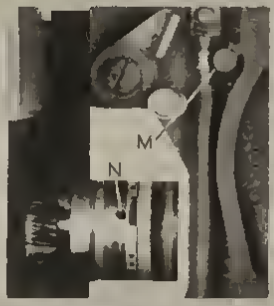

FIG 5

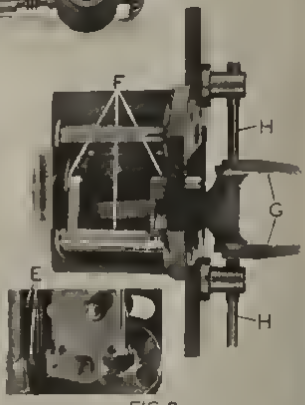

FIG 6

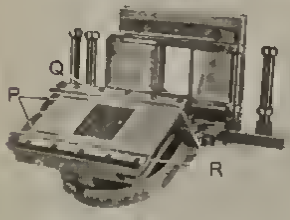

FIG 7

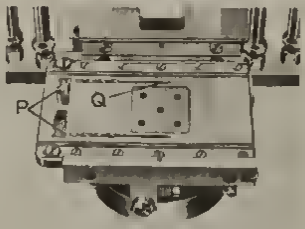

FIG 8

FIG 9

ONCE A DAY, ONE DROP OF OIL { AT B C, E F, G, I, J, K L, U / AT D FOR REGULAR CAMERA ONLY / AT N FOR SILENCED CAMERA ONLY }

ONCE A DAY, OR EVERY 5000 FEET, ONE DROP OF OIL AT O, P, Q, R.

FOR ULTRA SPEED WORK, THE MECHANISM SHOULD BE OILED AFTER EACH 400' WHEN RUN AT A SPEED OF 128 FRAMES A SECOND OR OVER

ONCE A MONTH { A SMALL AMOUNT OF WHITE VASELINE AT M. / ONE DROP OF OIL ON ALL ROLLERS, TURRET BEARING, FILM PUNCH, ETC }

KEEP A PIECE OF PERFORATED OILED PAPER BETWEEN APERTURE AND BACK PLATES OF ULTRA SPEED OR SILENCED MECHANISMS WHEN NOT IN USE.

Bell & Howell Standard Camera Lubrication

THERE are three main types of Bell & Howell Standard Cameras—the regular, the super-speed, and the silenced camera for sound work.

These three types of camera are very closely allied to each other, that is, they have the same outward appearance and their major working parts are assembled in practically the same order within the metallic casing

The regular camera mainly differs from the super-speed camera in the intermittent mechanism, which for the latter is designed to precisely register as high as 200 picture frames per second.

The super-speed intermittent mechanism is used with some modifications in the silenced camera, while more important mechanical changes have been incorporated in the working parts of the camera itself.

It is quite evident that the super-speed camera will require more attention in regard to lubrication than the regular camera, due to the extraordinary use to which it is submitted.

The function of the lubricant is to form a thin film between the working surfaces and, therefore, hold them apart and allow them to slide over each other with a minimum friction

This necessity is still more evident in the silenced camera when it is considered that in order to eliminate the clicking noises peculiar to all ball bearing, these have been replaced by solid steel and bronze bearings

The most recent models of the Bell & Howell silenced camera have been equipped with newly designed solid graphite bearings

At Figure 3 is shown the intermediate transmission shaft of the camera, with its graphite bearings removed to show their special construction The graphite packed within them produces a constant supply of lubricant, which entirely eliminates the danger of the mechanism "freezing" even under severe working conditions.

The first consideration that appears as quite evident is the necessity for perfect cleanliness of the lubricant material; second, the inadvisability of using a greater amount of lubricant than is necessary for the particular machine, and third, the choice of the appropriate oil.

The working parts of the Bell & Howell camera are tightly enclosed in a casing in order to protect them from the possible infiltering of dirt Means were therefore devised by which this protection could be maintained while making it possible to apply the lubricant in proper quantity and with the assurance that it would reach the parts necessitating it.

The illustration accompanying this article shows at

Fig 1—A general view of the Bell & Howell silenced camera

Fig 2—The position of the oil distributors in the camera casing.

Fig 3—Two of the graphite bearings distributed within the camera.

Fig 4—General view of camera film chamber with intermittent shuttle mechanism removed showing driving gears and cams.

Fig 5—A detail of the cams actuating the regular intermittent shuttle mechanism

Fig 6—A general view of the regular intermittent shuttle mechanism with detail insert of register leaf bearings

Fig 7—The high speed intermittent check-pawl mechanism adapted for sound work

Fig 8—A detail of the super-speed intermittent check-pawl mechanism

Fig 9—The intermittent check-pawl mechanism with its parts disassembled

The legend of the illustration refers to the position of the oil distributors throughout the camera and instructs the amount of lubricant that is necessary for its proper functioning

The oil distributors act as oil filters and to this effect are fashioned in cup form filled with felt, which, after being saturated with the lubricant, distributes it through seepage to the proper parts of the machine.

The following explanations will outline briefly the functions of each hole, to facilitate a satisfactory understanding of the arrangement of the oil channels.

The dissolve mechanism operates inside the shutter barrel "A" Fig 2, so that, in order to oil it, **the shutter must first be opened to** 170 degrees (full opening) This aligns the oil hole in the dissolve mechanism with the oil hole "B" (Fig 2).

The oil hole "C" (Fig 2) lubricates the spiral which operates the dissolving shutter.

The oil hole "D" (Fig 2) lubricates the roller of the regular shuttle mechanism used for non-silent work It is not necessary to oil a silenced camera at this point.

If the regular shuttle mechanism is used, it is necessary to oil the front and rear register leaf bearings shown at "E" and "F" respectively in Fig 6, and the shuttle shoes "G" (Fig 6) The guides "H" (Fig. 6) above and below the shoes do not require any oiling, but must be carefully wiped and kept scrupulously clean

Oil holes "I" and "J" (Fig 2) lead to the intermediate shutter driving mechanism bearings.

Oil hole "K" (Fig 2) lubricates the worm gear which drives the footage dial through the gears "M"—Figures 4 and 5. These gears are best lubricated by a small quantity of vaseline, to avoid any possibility of oil splashing onto the film.

Oil hole "L" (Fig 2) takes care of the main crank bearing

When using the silenced mechanism, it is necessary to put a drop of oil in the hole "N" (Fig 4 and 5) to lubricate the main drive bearing

The film mechanism itself naturally requires very careful attention In addition to oiling the oil hole "O" (Fig. 9), it is necessary to put a drop of oil on the fingers "P" of the vane "S" (Fig. 7, 8 and 9) and on the slide operating nut "Q" (Fig 7, 8 and 9). To oil this latter part, turn the mechanism gear until the nut is visible through the slot indicated in Figures 7 and 8

It is also necessary to put a drop of oil in the slot "R" shown in Figure 7, in order to completely lubricate the vane "S", so that it freely slides up and down against the surface "T" (Fig. 9).

With the mechanism with four pairs of pawls (Fig. 8) which is used for taking ultra-speed pictures, at the rate of 128 frames per second, greater attention must be given to its lubrication. The points "P", "Q" and "R" (Fig 8) require a drop of oil for every 400 feet of film run through the mechanism

A drop of oil can be used occasionally on the roller eccentrics, punch, door slide and hinges, and booster rollers, depending upon the usage the camera receives A drop of oil should be put on the oil hole in the magazine pulley U—Figure 1.

(Continued on Page 20)

An excellent example of atmosphere in a still picture

Making "Stills"

Frank Powolny, "Ace" Still

by **WALTER**

ONLY during the last few years has the photography of the "production still" picture come to be recognized as of equal importance with that of the production itself. After all, the production still, as seen in the magazines and newspapers, and in theatre lobby displays, is almost the only criterion by which the public may judge the visual merits of the production Therefore today the still photographer has become recognized as quite as much of a specialist—and an artist—as the cinematographer

This recognition has led to the recognition of individual still men as outstanding artists in their field exactly as certain cinematographers are conceded to be outstanding artists in their own work So, just as we have cinematographers like Hal Mohr, Karl Struss, Arthur Edeson, and a few others, whose very names stand for great cinematography, we have, too, still photographers whose names are inseparably linked with the best in still pictures And, exactly as every studio has its one or two "ace" cinematographers, for whose services directors and stars wage acrid battles, so have they their "ace" still men, whose services are as constantly in demand

For instance, on the Fox "lot" there is Frank Powolny Whenever a major production is about to get under way, you may quite confidently expect to find upon the personnel requisition the item, "Still Man—Frank Powolny" Directors want him because they know that he can give their ideas the finest possible expression in still pictures; cinematographers want him because they know him as an excellent artist and fellow-worker; and supervisors want him because they know his proven efficiency Through it all, Mr Powolny makes himself as inconspicuous as possible, and keeps on turning out the finest of stills for whatever production he may at the moment be engaged upon And he has, in the past, been engaged on such famous productions as "Seventh Heaven," "Four Devils," "City Girl," "The Black Watch," and, latest, "The Big Trail"

This still tells its story very effectively

Tell a Story . .

Man, Tells How It Is Done

BLANCHARD

He doesn't talk much at any time—and he is scared stiff at the mere thought of being interviewed But when I finally cornered him on one of the big stages at Fox Hills, his real interest in his work soon overcame his natural reticence "I can't talk," he protested, "It's not my business. I'm here to make the best stills I can, and let the other folks do the talking And I like to make still pictures I used to work on a movie camera, but I honestly prefer what I m doing now Maybe it's because I started in as an artist You see, when I was a youngster in the Old Country (I was born in Bohemia—Czecho-Slovakia it is now), I studied to be a sculptor, I worked at that a while, and painted, and sketched—but you know how it is with a poor Kunstler over there: and a fellow has to eat at least once in a while Anyhow, I drifted out of it, and finally, after the war, I came over here, and eventually got a job in one of the Film Laboratories in Hollywood I learned all I could about things there, and kept my eyes open, looking for a studio job Finally it came, and I started in as an Assistant Cameraman In time I worked my way up to a camera position In those days, you know, the cameramen had to shoot the stills too, so I got a good taste of both kinds of camerawork. When things were changed, and it got to be the regular thing to have one man devote himself entirely to the still work, I thought it all over, and decided that I'd much rather do that than anything else—so here I am.

"They used to say that still men are disappointed cameramen, but I don't think so; I've known too many good still men who were just as good with a movie camera, and who, like me, prefer still work, to think that. Perhaps it's something in their psychological make-up: all I know is that I, at any rate, prefer still work In my case, I suppose its got a lot to do with my early training in painting and sculpture, for in

(Continued on Page 26)

Another splendid example of a good still

This still tells its own story of struggle and suffering

Fig 1, Upper Left
The New Tanar Recording Truck

Fig 2, Upper Right
Front View of the New Truck.
Note mounting of Generator.

Fig 3, Center
Interior of truck, showing power controls and recorder

Fig 4, Lower left
General interior view of New Tanar Truck

Fig 5, lower right,
Control panels, recorder, and monitoring speaker

Tanar Corporation Introduces New Sound Truck

Larger and Improved Recording Equipment Designed by Len Roos, A. S. C.

ONE of the outstanding technical developments in the field of motion picture sound recording during the past year was the development of a high-class, portable sound-recording equipment This is the Tanar Sound Recording System, and was designed by Len H Roos, A S C, F R P S It was the first really portable recording equipment made, and was intended primarily for the independent newsreel and industrial cinematographer It consists of a self-contained recording equipment, using the single-film system, and is so compact that it adds only two small cases, weighing together only seventy pounds, to the regular camera outfit. The heart of the outfit is Mr Roos, famous Tanar glow-lamp, which has proven itself to be one of the best and most rugged recording lights ever made That this remarkable recording system fills a real need in the moving picture world is well attested by the steady flow of orders which have kept Mr Roos and his associates working overtime for months

However, Mr Roos has not been content to rest idly upon his laurels, for he has realized that there is also a considerable need for a somewhat larger recording apparatus, which will afford almost equal portability, yet which will permit the simultaneous use of several cameras and microphones on larger cinematic jobs.

Therefore he has lately perfected a new outfit of this nature, which will meet the requirements of the larger commercial operators, and of the independent feature producer in the dramatic field, as well

This new equipment is, next to its smaller brother, probably the lightest and most portable complete recording system made It is housed in a specially designed three-quarter-ton Dodge speed truck, and embraces all of the valuable features of the much larger studio recording trucks, with the added advantage of far greater mobility

The recording unit itself is of standard construction, using the double film system, and making the actual recording (which is of the variable density type) with the Roos Tanar glow-lamp The amplification system permits the use of from one to four microphones, and as many as six cameras Ample range of gain is provided to take care of every possible condition of either studio or field recording. Frequency meters and volume-level indicators are provided so that any number of scenes may be made, under varying conditions, yet all recorded at a perfectly uniform volume-level.

The interior of the truck has been treated acoustically, so that it can be used as a monitor-room To this end a large, plate-glass window is provided in the right-hand side of the truck, through which the mixer can follow all the action which takes place on the set, and the various controls of the recording system are grouped so as to be in easy reach from this position The panel containing the amplifiers and volume controls, as seen at the extreme right in Fig 5, is mounted on a hinged shelf which can be pivoted to any angle that is convenient for the man at the dials. The sound may be monitored either through the loudspeaker at the mixer's left, or through a pair of head-phones The entire recording equipment is mounted upon sponge-rubber bases so that there is no possibility of damage through either vibration or road-jolts

A most distinctive feature of this equipment is the provision made for recharging the storage batteries which furnish its power. In most installations of this sort, the batteries must either be recharged from a fixed generator or power supply, or from a bulky farm-lighting generator carried either on the truck itself, if it is large enough, or upon a separate truck or trailer In the new Tanar installation, provision is made for using the truck's own motor to drive a small but efficient generator This generator is mounted upon the front of the truck, and is connected with the motor by a belt. Governors and generator-cut-outs are provided to prevent overcharging, while the ratios of the drive are so calculated that the motor does not turn at an excessive speed when performing this task When charging, the truck's motor need only turn at a speed roughly corresponding to a road-speed of twenty miles per hour, which reduces both the noise and the gasoline-consumption to the absolute minimum

This feature, according to Mr Roos, will enable the outfit to operate for extended periods far from any regular base of supplies

"We believe," he states, "that this new equipment will serve a double purpose For not only will it meet the recording needs of the larger industrial film operators, but it will also give the independent producers of Hollywood a high-quality sound recording service at hitherto undreamed-of economy.

"The sound requirements of the independent newsreel and industrial cinematographers are being amply met by the original Tanar equipments," he continues, "but there has, as yet, been no recording equipments developed which will adequately serve the larger industrial operatives, who actually need a miniature studio equipment with which to cope successfully with the problems of their specialized, yet infinitely varied work. We believe that this new outfit will, however, solve their recording problem

' In addition to this, the new outfit is designed to meet the needs of the independent producer Thus far, while they have had available several systems of studio sound-recording, they have not been able to operate outside of the studios, because of the great expense of operating the large recording trucks Our truck has been developed with but one thought in mind absolute economy of operation insofar as it is consistent with first-quality sound recording We believe that we have attained our goal in this respect, and so we now announce to the independent producer that, for the first time, quality sound is in a position to talk prices to him Our equipment has been made so sturdy that defects and breakage of the sound apparatus is well-nigh impossible, while its mobility is such that even the fastest moving troupe will never have to wait for the sound equipment to arrive.

"Our first recording truck, which is now operating, will be held in Hollywood for our own use, and for leasing to any producers desirous of using it We will be able to make deliveries of similar trucks on very short notice In a word, we offer this new development of the Tanar Sound System to the industry as our attempt to solve the recording problems of the independent producer and the large industrial operator"

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As the Editor Sees It

Let's Have It

SITTING back in the editorial chair and trying to figure out just what one's readers would like best, and just what would be of the most use to them is a tough assignment Someone once said that the most successful editor is the man who is the best guesser Maybe so

However, we do not like to depend upon guessing in supplying material for the Cinematographer So we ask questions of everyone we think may be able to throw some light on the subject Now we ask our readers for their suggestions

In other words, if you would like certain articles dealing with certain subjects, just drop us a line and tell us We aim to please, but we may be a long time in hitting upon the subject which will be of the most interest to you Wishing to always please, we invite every reader at this time to send us a line telling us just what you think of the magazine and its general editorial content We are not looking for praise, although it is always welcome to an editor whose shoulders are always humped over with the weight of blame We want adverse criticism as well, if you have it. By telling the editor what you like and do not like, he can better give you what will be useful and pleasing

So, get out the hammer or the box of flowers and let's hear from you.

Watching Chaplin?

ALL Hollywood is eagerly awaiting the presentation of Charles Chaplin's silent picture, "City Lights." It is generally understood that much hangs in the balance, and that if Chaplin's silent picture cleans up there will be some surprises coming from other producers

All the producers are not solidly sold on sound yet, if you can pin them down to facts And if Chaplin's picture goes over it is a good bet that others will follow Already there is a tendency in the picture field to use less dialogue in the sound pictures—and to good effect, too This writer had the privilege the other night of seeing a preview of "Monte Carlo," the Lubitsch picture for Paramount While it is a talkie and even has some very good songs and singing in it, there are many scenes which hark back to the silent days, and very effective are those scenes Whether or not this was done intentionally we cannot say, but it has been done to the great improvement of the picture

Incidentally, Victor Milner, A S C, deserves special mention for the remarkably fine cinematography in the picture Milner always does a splendid job, but in this one he has done work of a standard that will be difficult to match

Better Times Coming

OUR old friend, Walter Eberhardt, who sends out the news of the Electrical Research Products, Inc, from the New York office, gives us one of the few rays of sunshine in this troubled picture world We have before us a story from him in which he predicts that business is at last on the up grade, and really proves his point quite well by showing a tremendous increase in theatre installations starting now It is a good indication, and we hope that it will keep up and that every theatre will have to put up the S R O signs within the next month

Slightly in Error

WITH theatre patrons running to the beaches or to the miniature golf courses, one would think that theatre managers or bookers would keep the ear to the ground when a really good picture comes along Now and then, however, they seem to have cotton in the ear

Take the case in Chicago last month Publix-B & K bookers looked at "Grumpy," which is one of the finest pictures Paramount has given the public in many a moon They passed it up Of course there is no sex appeal in the picture, and no spots that a censor might delete or which might make it a picture for adults only Nevertheless, RKO booked it and put it into the Palace at Chicago First week grossed $24,500, the largest intake since the house switched to vaudefilm policy A clean-up, and rightly so, for Cyril Maude is a grand actor and the story is well told and entertaining Perhaps the producers will take a tip from this, and make better pictures with less of so-called sex appeal, feminine legs and the like.

Cinematographic Annual

THE reception accorded the Cinematographic Annual has given this writer a thrill such as he has not had for years From every section of the country letters are pouring in proclaiming it as one of the greatest books ever published in the technical field This is encouraging for those of us who labored for months in its preparation We hope you all have your copy and will receive pleasure and value from its perusal

Pictures for Instruction

THE importance of motion pictures is brought out by the fact that the United States War Department is planning to instruct its great body of Reserve Officers via the talking picture route Colonel Prosser, head of the motion picture department, says that pictures already have played a great part, but that the talking pictures will be one of the greatest steps the army has taken in an educational way

Many M-R Devices

IT MAY be nearly truthfully stated that this is the age in which everything under the sun is manufactured Food, furniture, automobiles and other generally classified industries are widely known But when one swings deeper into the maze of production there are to be found hundreds of unique industries that have taken form to supply unusual demands created by other sources in this era of manufacturing miracles

For example, the talkie motion picture industry necessitated the development of new lighting equipment, which was instrumental in the creation of Mole-Richardson, Inc, the organization which designed and perfected incandescent lighting equipment, commonly known in the picture industry as 'Inkies" Mole-Richardson, Inc, also design and construct all types of sound and set equipment

This highly technical organization has, in many instances, taken crude, makeshift apparatuses constructed on the set and developed them into highly practical and efficient time and money-saving devices

GOING UP THIS HERE GRADE IS A LOT EASIER THAN IT USED TO BE
THIS IS A GREAT ROAD THEY'RE BUILDING TO "PROGRESS"
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PROGRESS
GLENN R. KERSHNER A.S.C

"Squeeze" Track for Volume Brake

M-G-M Develops a Control for Sound to Aid Talker Standards

by **WESLEY C. MILLER**

THE proper regulation of volume or apparent loudness is essential to good reproduction of sound. This is particularly true when the sound forms a part of a sound picture, as the success of the latter in producing an illusion of reality is greatly affected by sound volume. If the recording has been well done, and if the theatre apparatus is in good condition, the picture may still be poorly shown if the sound volume is improperly handled. This is clearly a matter of showmanship, and must be studied as such. The definition of suitable volume is simple. It is the volume at which the desired illusion is obtained. The illusion of reality which results from such a combination of sound and scene is such that little imagination is required to think of the scene as being real. The attainment of this result is the goal of all sound picture productions.

In real life our personal and inherited experience produces the effect more or less automatically. Involuntarily, we correlate the impressions we receive—and equally involuntarily, we adjust ourselves to the natural distortions in every-day phenomena. However, an artificial device, such as a recording and reproducing system accompanied by a motion picture, has no such involuntary reactions. It has certain potentialities which may produce amazingly good results, but it must be guided throughout every step or some form of distortion will appear. If we are to show to our audiences a product which will, without effort on their part, give the illusion we plan, this guidance must come from both producer and exhibitor. The studio must anticipate the problems of the theatre, and the latter must endeavor to exhibit the product in a manner approaching that designed by the producer. This combination alone will result in a high average success in terms of audience appreciation.

Sound Not Understood

Technical perfection may be analyzed in terms of scientific laws which are common property. There is general agreement on the fundamentals, but due to the newness of sound reproduction on its present scale there is a tremendous lack of understanding of some of the details. This is naturally less apparent in the studios and among the producers, as they are closer together geographically, and as they were the first to have to meet the problems of the new business. Largely through their own initiative and by their own analysis of the situation, they are for the moment in the position of being able to help the exhibitor to get the results both desire—to please the audience. Among other things, they are trying to do this by the expedient of making proper sound reproduction as nearly automatic as possible.

Sound volume is definitely interrelated with frequency response of records and apparatus, theatre and studio acoustics, sound perspective, personal desires, and a multitude of other factors. Eliminating all of these for the purpose of the present discussion, volume control presents a particular problem. The total range of volume to which we are accustomed in real life is tremendous, and quite beyond the possibilities of any known commercial reproducing device. Fortunately, this is not an impossible limitation. In the first place, we shall probably never wish to reproduce in a theatre the loudest sounds we can feel or hear, as they would be uncomfortable to an audience. Similarly, the lowest sounds we reproduce must be loud enough to be somewhat audible over the theatre-noise—breathing, rustling of clothes, and general movement. Consequently the total range to be accommodated is reduced to a point where it is entirely practical to take care of.

Extending Range of Reproduction

This range, however, still exceeds the capabilities of the record itself. In recording we have two definite limits—an upper limit represented by the overload point of the recording device and medium, and a lower, which is the inevitable surface noise in a record of any kind. Exceeding the upper limit introduces disagreeable distortion without noticeably louder apparent volume. Going below the lower limit results in a loss of part of the record by the masking effect of the surface noise. Every sound recording technician is continually making use of various devices to get the most effective results from this limited recording volume range.

Fortunately there is available a means of somewhat extending this range in reproduction, through the medium of adjustable amplification of the record. By means of this we may amplify some parts of the record more than others, and produce the effect of an over-all range greater than the recording range proper. Even this available increase is limited, as too much additional amplification brings forth other troubles from excessive surface noise, machine noise, and perhaps amplifier or other system overloads. Judiciously used, this factor of additional adjustable amplification is a means of greatly enhancing the effectiveness of the reproduction.

In recording we plan to make use of this extension when necessary. Ordinarily the attempt is made to have a record run without such a change, and the great majority of records fall in this class. But when we do have to use the additional amplification in the reproduction, the operator must know when to use it, and, more important, must use it. Therein lies a weakness which has resulted in many a poor reproduction.

The theatre operator has at his command some form of volume control—a fader or similar device. If cues are furnished with the picture he can control the volume by following these cues with the fader, but if the fader is in the projection booth he has no way of checking the resulting effect in the house, unless by reports from an observer. Fair results may be obtained by such a mechanical method. However, the overage operator in a booth has plenty to do during the showing of a picture—changing reels, watching lamp adjustment. The result is that his attention to the fader must suffer.

In certain cases the Metro-Goldwyn-Mayer organization has advocated the use of a fader installed in the auditorium and operated by a special operator, who is then in a position to know exactly how the picture sounds and to regulate the sound accordingly. This has produced excellent results, but it has certain disadvantages, not the least of which, from the theatre standpoint, is the requirement of an additional operator who must necessarily be something of a sound expert and artist, in addition to his other attainments.

"Squeeze Track" Evolved

These are real problems to both producer and exhibitor in the face of an annual release of some hundred million or more feet of pictures each year, involving thousands of the theatres. With them in mind the Metro-Goldwyn-Mayer sound organization has evolved a means of practically automatic volume control for variable density film release, which has been very effective in practice. From the appearance of the sound track which it uses the name of "squeeze track" has come into use.

(Continued on Page 24)

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Bell & Howell Lubrication

(Continued from Page 11)

This takes care of the magazine hub bearing The magazine rollers do not need oil A drop of oil should occasionally be placed on the bearings of the pulley of the belt tension unit and on the dissolve lever

When the ultra-speed type of mechanism or the silenced mechanism are not in use, a piece of perforated paper soaked with oil should be inserted between its aperture and back plates Even though the aperture plate is of high quality stainless steel, this precaution will help in keeping it in perfect state of cleanliness which is necessary to avoid possible scratching and abrasion marks Just before using the camera, wipe the surplus oil off the plates with a piece of clean, lintless cloth

In threading this type of mechanism, arrange the loops so that they just touch the guide rollers Incidentally, after opening the gate of the mechanism, make sure that the gear teeth are still correctly meshed This is very important, otherwise the shutter may be set out of synchronism with the mechanism (See Bulletin on Silent Standard Camera).

Also, in closing the gate, press down on the gate closing lever so as to drive the locking latch all the way home This insures the aperture plates being set for the correct clearance, and also insures the tension on the film being correct

To conclude, it is opportune to mention that the quality of lubricant used is of extreme importance, and we strongly suggest that only the Bell & Howell camera oil be used for this purpose

Proper lubrication insures the longevity and perfect functioning of these instruments.

Vitaglo Recording Unit

FROM Chicago comes the announcement of a new portable recording unit which is being produced by the Vitaglo Corporation, 5050 Sheridan Road The device is designed for studio, commercial and newsreel use The following description from Mr. A. B Chereton of the Vitaglo Corporation is furnished for those interested in such equipment

First, the writer has been a staff cameraman with Fox silent news for four years, and with Fox Movietone for the last two years. Having had practical experience in the requirements of the newsreel and commercial cameraman, with the help of competent engineers, the recording light and amplifier were designed

The light is not a neon glow lamp which is now being sold on the market, but contains a coated cathode and anode which produce an intense ultra violet light so necessary for recording This light has an intensity great enough to sufficiently expose Grandeur film or positive We have had this light on test a sufficient time to continuously expose over 75,000 feet of film without showing any signs of an appreciable breakdown Knowing sound recording as I do, I feel quite confident in saying this light will equal anything on the market today Its superiority remains to be proven

The amplifier was designed with the needs of the newsreel and commercial cameraman in mind It has provision for 4 microphones, carbon and condenser, has a visible volume indicator, a gain of 80 D B in steps of 3 D B, and is light enough to be carried by one man. This amplifier will meet any requirement for studio or outdoor recording, and is constructed in a steel case The amplifier and light require only 420 volts for operation

We furnish the entire equipment complete with cases, batteries, amplifier, two recording lights, one condenser microphone, flexible rubber cable, and the slit installed in a silenced camera for $4250.00 This includes the Vitaglo slit which is a proven improvement over methods now used It allows a maximum percentage of light to reach the film

The cases are constructed of reinforced fiber and are extremely durable The entire outfit can easily be carried in the rear of any passenger car

Unusual Installation

ONE of the most unusual jobs ever put up to the Electrical Research Products engineers is the recently completed installation of a Western Electric Sound System in the Auditorium of the U S Naval Academy at Annapolis, Md Features of the auditorium and academy regulations combined to demand special precautions in completing the job

One factor that entered into the planning was that the original design of the auditorium as a trophy and relic room had to be maintained Another was that midshipmen at the academy are required to leave the auditorium at a specified hour regardless of whether the hero and heroine have reached their final clinch or whether the villain is about to throw the tear gas bomb at the moment the audience must leave Consequently it was necessary to make the installation absolutely "foolproof" to prevent interruptions and assure the completion of the program at the designated hour

An entirely new projection booth had to be built and horn boxes constructed that were light, portable and sturdy

In building the booth steel plates were used for the floor on top of a lining of one-half inch sheet asbestos The walls of the booth, of one-eighth inch galvanized iron sheets riveted throughout, were built on an angle iron framework.

The battery room, adjacent to the main projection room, was similarly constructed A ventilating system was installed to exhaust the lamp and battery room gases to the outside air

The sound system conduit was run above the booth and the entire set of conduit runs was covered with another steel deck" to be used as a spotlight platform for any amateur shows produced by the midshipmen This upper deck is removable in sections over the conduit fittings to make the wiring runs easily accessible

The front and outside walls of the booth were treated with Celotex and draped with a heavy velour curtain to harmonize with the auditorium appointments

The horns were supported so that they can be removed at times when the entire stage is needed for the midshipmen's shows To make the horn boxes portable rectangular frameworks of three quarter inch pipe were cross braced on five sides with aeroplane cable and turn-buckles The cable was wound and taped to prevent vibration. The entire box, with the exception of the front, was covered with Celotex and bolted to a polished copper framework Suspended at a definite height they were made level by a series of stout manila ropes When the time comes to remove them temporarily from the stage this can be done by "Dollies" with rubber tired wheels that can be brought under each one

Army to Use Talkies

THE United States War Department is planning to go into the making of talking pictures in rather a big scale, according to the report brought to Hollywood recently by Colonel W E Prosser, head of the motion picture department of the Signal Corps

The plan, according to Colonel Prosser, is to make training pictures with sound and use these talking pictures for the training of the some 125,000 officers in the Army Reserve Corps The army will set up a studio with the necessary physical equipment, and will select a production personnel from officers of the Signal Corps

The plan is to send at least two of these officers to Hollywood for several months of study of methods and other detail needed to fit them better for their tasks as production heads A special meeting was held recently with representatives of all the various branches of the picture makers, under the auspices of the Academy of Motion Picture Arts and Sciences At this meeting Colonel Prosser was assured of the unqualified support of every branch of the industry

Wide Film Cinematography

(Continued from Page 9)

vital that Grandeur lenses be selected with a view toward getting this effect, so that the crispest, deepest pictures may be had

Another point which has been a source of trouble to the early users of wide film is its liability to abrasion During the many months we were working on "The Big Trail," we shot more than half a million feet of 70 mm alone, with absolute freedom from scratches or abrasions of any kind This was done merely by exercising extreme care in the always important matter of keeping the cameras and magazines clean It became a hard and fast rule that the cameras **must** be cleaned thoroughly every night, not only with brushes, but with compressed air streams And, since we were working under all sorts of conditions on the various locations which we pioneered—in the insufferable heat, humidity, and dust of the Arizona deserts, the damp cold of the Montana and Wyoming mountains, and the dank dustiness of the northern forests—without any trouble from this source, it would seem that only such care is necessary as a preventive

Another troublesome detail for which we found care a sure cure is that of film curling and buckling A buckle in a 70 millimeter camera is a terrible thing, for it not only ruins a large quantity of valuable film, and often damages the camera, but it invariably makes the motor a total loss. During our first week's work on the picture, we had several bad buckles—which meant new motors every time Naturally this was serious, it couldn't be allowed to continue So we bent all our energies toward finding the cause of these buckles. Eventually we found it to be caused by friction between the edges of the film and the walls of the magazines After that, we took special pains in loading, making sure that every roll of film used was absolutely true to its spool, with no chance of touching the walls of the magazine—and we had no more buckles during the picture.

Aside from these details, Grandeur cinematography is, from the technical viewpoint, no different from standard-size camerawork Any man who is technically able to do good work on 35 mm film should therefore be able to do just as well on wide film. In this connection, it is interesting to note that while on "The Big Trail," as we were constantly moving around the country during our extended location trip, neither Mr. Walsh nor myself was able to see any of the film which we shot until our return to Hollywood—nearly five months later. That the film—more than 500,000 feet of Grandeur alone—was all technically perfect is not only a definite demonstration that wide-film cinematography is basically the same as 35 mm. work, but a very high tribute to my associates who manned the other Grandeur cameras

From the artistic viewpoint, the chief requirement of Grandeur cinematography is that both the cameraman and the director learn to accommodate themselves to the wider frame The cameraman's problem is probably the easier, for he soon learns that composing a picture on the wide frame of the Grandeur camera is not, essentially, so different from composing for the old "silent standard" rectangle, and far easier than for the nearly square Movietone frame If a man is enough of an artist to successfully compose his cinematic pictures for the earlier formats, he should be able to accommodate himself to this new one, just as a good painter can adapt himself to the requirements of his usual canvas, or of great mural panels The director, however, must in a Grandeur picture pay considerably more attention to his background action than is usually the case, for, even in close-ups, the depth of focus demanded by Grandeur makes the background an important part of the picture Incidentally, Grandeur reduces the number of close-ups considerably, as the figures are so much larger that semi-close-ups are usually all that is needed

In working on such a picture as "The Big Trail," 70 millimeter is a tremendously important aid, for the epic sweep of the picture demands that it be painted against a great canvas Grandeur gives us such a canvas to work with, and enables us to make the background play its part in the picture, just as it did in the historical events which we are dramatizing And that is what we have tried to do throughout this picture to make history live again upon the screen The chief motif of the story is the indomitable perserverance of the pioneers, as shown in their pushing west across the great deserts, the vast plains, the towering mountains, and into the great forests of California and Oregon The background thus plays a vitally important role in the picture—a role which can only be brought out completely by being shown as 70 millimeter film can show it Lucien Andriot, who photographed the standard-film version of the picture, did a superb piece of work, but the medium with which he was working could not begin to capture the vast sweep of the story and its background as did the Grandeur Working in 35 mm film, he was simply unable to dramatize the backgrounds as did the larger film, for in 35 mm he could not attempt to adequately show both the vast backgrounds and the intimate foreground action in a single shot as the Grandeur cameras can The illustrations reproducing the identical scene as treated by both 35 mm and Grandeur cameras shows this admirably

From my experience with 70 millimeter cinematography on 'The Big Trail,' I can confidently say that the wider film is not only the coming medium for such great pictures, but that it will undoubtedly become the favored one for all types of picture It marks a definite advance in motion picture technique, and from it will undoubtedly be evolved the truly stereoscopic picture of the future, toward which so many people have long been striving As I have worked, so far, only with the 70 mm film, I hardly feel qualified to prophesy as to the width which the industry will ultimately adopt as the standard, although I naturally lean toward the Grandeur, with which I am most accustomed. However, wider film is so definitely a desirable improvement that I hope that a definite standard will soon be accepted Once that standard has been determined, the public will, if given suitable pictures on the wider film, undoubtedly show a decided preference for it None the less, 35 mm versions must continue to be made for a long time but this will not be overly difficult, as reductions can be made from Grandeur negatives with perfect satisfaction, by optical printing, and at a far less expense than by shooting two versions, as has been done on all the wide-film pictures thus far made This will, of course, impose upon the cameraman and director a necessity for unusually great care in making his composition but it will hardly be more difficult than his present problem of composing 35 mm pictures so that they will be suitable for all of the many projection-apertures in use throughout the world. The greatest difficulty here will be in composing his two-shots, which will have to be made so that they can be, in the reduction-print, made into two separate close-ups But this difficulty is only a minor one when compared with the very great advantages which 70 millimeter cinematography offers in all other respects And when these advantages, and those which the wide film sound-track offers the sound-engineers, are combined with a perfected system of color cinematography, cinematographers and directors will indeed have a medium which is worthy of their best artistic and technical efforts

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Consolidated Film Shows Increase in First Half

WITH net earnings of Consolidated Film Industries for the second quarter being $572,763 61, or just slightly under the $581,713 10 in the same quarter last year, total for the first six months, after all charges, were $1,239,921 93, against $1,158,566 24 in the corresponding period of 1929

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On opposite page see what one of Hollywood's big directors says about this Annual

CULVER CITY, CALIFORNIA August 18th, 1930.

American Society of Cinematographers,
1222 Guaranty Building,
Hollywood, Calif.

Gentlemen:

I have just finished examining my copy of the Cinematographic Annual, and wish to take this opportunity of offering my sincerest congratulations on this magnificent piece of work.

To my mind, this is the most valuable technical book that has ever been offered the motion picture industry. It is the first real text book that has ever come out of the picture industry and should be read and placed in the library of every director, cameraman, sound technician or executive in the motion picture world.

Again accept my congratulations and very best wishes.

Very Cordially yours.

George Hill

Squeeze Track

(Continued from Page 18)

It is a well known fact that the sound volume resulting from a given variable density sound track record varies as the track width changes This feature is used for volume control Due to the width of the reproducing aperture, the effective normal track width is 0 080 inch. Reducing this width to 0 020 inch gives a reduction in volume of 12 db Moreover, the surface noise to signal ratio reduces in practically the same ratio, that is, the effective surface noise is reduced in proportion to the sound on the record If, then, we make our average volume track 0 040 inch wide by matting out half of the regular track, we may, by varying the width of the mat, get an increase or decrease of 6 db by making the track 0 080 inch or 0 020 inch wide, respectively This is the principle of the Metro-Goldwyn-Mayer "squeeze track"

In practice, recording is done as usual and the attempt made to keep the recorded level as nearly uniform as is consistent with the desired effects If, through some error of judgment, or because of the nature of the scene, a change in fader setting becomes necessary, the mat width in the release print is changed in the proper direction to produce the desired result Inasmuch as the normal track will produce but half the volume of an unsqueezed track it is of course necessary to run the theatre fader 6 db higher than normal, but this imposes no hardship

In operation each reel is handled as a separate unit, and the volume adjustments throughout the reel length are adjusted to keep within the limitations of recording volume range and squeeze mat range Many reels require no squeeze mat because the range in them is such that the normal recording range is sufficient In the theatre, then, if the operator adjusts any part of a given reel to the proper volume level the remainder of the reel is automatically right In other words, if he sets the fader right

This type of volume control has been in use for several months wherever the volume requirements have been such as to require it Comments from the field have been uniformly favorable, especially since the operation of the device has become better understood by operators Fader cue sheets still accompany each picture, but disregard of the instructions which they contain has had a less deleterious effect than the past If any part of a reel is set to give the right volume the rest is automatically correct If the volume is set for dialogue the high spots are found to be colored as they were designed to be The adoption of the device has enabled the producer to more nearly obtain in the theatre the result which he put into the picture, and his average of technical and artistic success has improved The operator is relieved of the difficult problem of constantly watching the fader cues The net result has been a very gratifying advance in the production of the much sought after illusion which the audience can enjoy and will appreciate

The preceding article is reprinted from The Journal of the Society of Motion Picture Engineers ED NOTE

M. P. Academy to Hold Two Meetings in September

THE Academy of M P Arts and Sciences will hold two meetings next month for discussion of production problems and possibilities of wide film Meetings will be held on Sept 10 and 17 Adaptation of technique necessary for shooting, sound, set design and wide film projection will be the chief topics at both conferences

UFA's Color

HAVING filed application in the last sixteen months for several dozen patents pertaining to sound film production, Ufa expects to be ready early next year to produce the first color film with its own method and by its own system Ufa's talking weekly newsreel is due to come out in the next few months

Have You Bought Your Annual?

Architect s drawing of new multicolor lab

New Lab for Multicolor

A CLASS A structure for Multicolor, Ltd, is now being rushed to completion, according to Mr H 8 Lewis, General Manager of the concern Located between Orange, Romaine and Sycamore Streets in Hollywood, the building will be two stories in height when completed, contain approximately 59 000 square feet of floor space and will have a completely equipped laboratory for the manufacture of Multicolor Film It is stated that general and executive offices of the Company will also be located in the building

The swiftly increasing demand for Multicolor Film and the future program of the Company which calls for extensive production and expansion, has necessitated the erection of the new Multicolor plant, according to Mr Lewis

Because of its simplicity and adaptability to standard camera equipment, Multicolor Film is to be manufactured extensively, not only for major motion picture companies, but also for use in industrial, educational and amateur fields, states Mr Lewis

In commenting upon the technical features of Multicolor Film, Mr. Lewis states that it eliminates use of special camera equipment or additional lighting Briefly, Multicolor affords perfect color on a black and white production basis Prints may be projected in any standard projector A double negative which serves both as a film and a filter is a particular feature of interest to cinematographers

Mr Lewis states that anything possible in monochrome is equally possible in Multicolor, no other change being necessary than the use of Multicolor Films and the adjustment of the camera gate to accommodate the two films The previous impossibility of making slow-motion pictures in full color is now achieved with the Multicolor process Present sound systems may be used, the sound track being colored by either one of the basic colors used in coloring film

Executives of the Company state that the facilities of the new laboratory will enable the producer to get his daily rushes in both sound and color at the same speed with which he is now getting them in monochrome

The Multicolor structure is being erected by Meyer Bros, general contractors, and is scheduled to be completed and ready for occupancy within ninety days It is stated that the laboratory plant will have a capacity adequate for all future requirements According to Mr Lewis, the plant when completed, will represent an expenditure of approximately $500,000 00 for land, building and equipment

Perry to Honolulu

Harry Perry, A S C, is in Hono'u'u where he is photographing two pictures in Multicolor He writes that the weather is wonderful with no heat spells

Dyer in East

Elmer Dyer, A S C, is still at Lakehurst, N J, doing the air and Akeley cinematography for Columbia's big picture, "Dirigible"

DUNNING PROCESS.....

A Few of the Current Releases Containing Dunning Shots

"What a Widow"—Gloria Swanson
"Soup to Nuts"—Fox
"Her Man"—Pathe
"Romance"—M-G-M
"Half Shot at Sunrise"—RKO
"Just Imagine"—Fox
"Leathernecking"—RKO
"Up the River"—Fox
"Madame Du Barry"—U. A.
"Holiday"—Pathe
"Liliom"—Fox
"The Lottery Bride"—U. A.
"Born Reckless"—Fox
"Losing Game"—RKO
"Tonight and You"—Fox

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Recent Releases of A. S. C. Members

"The Sea Bat"—M-G-M	Ira Morgan
"Children of Pleasure"—M-G-M	Percy Hilburn
"Rain or Shine"—Columbia	Joe Walker
"One Mad Kiss"—Fox	Chas Van Enger
"Good Intentions"—Fox	George Schneiderman
"Sins of the Children"—M-G-M	Henry Sharp
"Rough Waters"—Warners	Wm Rees
"Ladies Must Play"—Columbia	Joe Walker
"The Storm"—Universal	Alvin Wyckoff
"On Your Back"—Fox	Joe August
"Old English"—Warners	James Van Trees
"Hell's Angels"—U-A	Tony Gaudio and Harry Perry
"The Lonesome Trail"—Syndicate	Paul Allen
"Dancing Sweeties"—Warners	Robt Kurrle
"Way Out West"—M-G-M	Henry Sharp
"Anybody's Woman"—Paramount	Chas Long
"Moby Dick"—Warners	Robt Kurrle

McNabb in Hollywood

J. H. McNABB, President of the Bell & Howell Company, arrived in Hollywood last week for a brief business visit, and from the day he landed has been one of the busiest men in the city.

Mr McNabb is optimistic regarding business conditions, and predicts that there will be a general revival of good business in the very near future. In fact, he states it has already begun.

Boyle Completes "Silver Horde"

John Boyle, A. S. C., has completed the cinematography on R-K-O's picture, "The Silver Horde." He spent considerable time in Alaska shooting exteriors

Photographers!

"How Talkies Are Made"

The 25c book that is taking the country by storm, contains a special article by Hal Mohr, Universal Cameraman, President of the American Society of Cinematographers, called

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Making "Stills" Tell Stories

(Continued from Page 13)

each case there is the same problem: that of suggesting motion, and telling a story in a fixed pattern of light and shade. That's something entirely different than what the cameraman is up against, for he has to deal with the actual motion itself. Then, the different kinds of still work please different people: some like portrait work, and some like production work. I've tried both, and for myself, I'd rather work on production. There's always something new happening in it, new people, new places, new conditions, so that it is altogether different from the constant sameness of the work in a portrait studio.

"I don't know that I can say much about the technical end of the work. It all boils down to the fact that you've got to know photography from A to Z, so that you can make the best possible picture in the shortest possible time. Nowadays they don't like to see a second wasted anywhere along the line, so your still man has got to be ready to jump when his time comes. He's got to know what to do long before he makes his exposure, so that the company won't be held up. And he's got to be **right** the first time. You don't often notice a chance for retakes on stills, do you? And on these big outdoor pictures, like 'The Big Trail,' the still work keeps you jumping. On that picture, for instance, I was the only still man—and I had to keep up with nine or ten movie cameras. Some of these scenes, like the buffalo drives, and so on, kept me busy, I can tell you, for there's no posing a herd of buffalo! You've got to be ready, set up, and then get your pictures while the getting is good. On that sort of thing I use both my 8x10 camera and my Graflex. I set up the big camera where I think it will do the most good, and get what I can with it—and then the rest with the Graflex.

"As far as the film and cameras go, they're just the regular thing—an ordinary View Camera and Graflex, and ordinary Eastman Panchromatic cut-film. I don't go in much for filters, as a rule, for they take up too much time, and, then, with the heavier ones, they make the color-values look unnatural. So on production work I only use a K-1, K-2, or K-3. I leave the heavier filters, and the A's, C's, F's, and so on strictly alone, except when I'm after night effects, or doing some pictorial work of my own. The important thing for a still man to remember about filters is to use them only enough to make things look perfectly natural. On exteriors, for instance, a bunch of nice clouds may look pretty, but if you have to use such a heavy filter to get them with that they stand out against a dark sky, you're going to make your people look unnatural. Besides, that dark sky isn't very natural itself, is it?

"Another thing that the still man has to remember, but which doesn't bother the cameraman, is that all of his pictures are going to be reproduced in magazine and newspaper cuts. For this reason, he can't go in too much for delicate gradations, nor for extreme high-key or low-key effects: since his pictures are destined for reproduction, which debases all these delicate gradations, they must be quite snappy, with reasonably well-defined contrasts. It's a good deal as though the cameraman had to remember that his release prints were going to be made of bad "dupes," and poorly projected. And just as the cameraman has to remember the different projection-apertures, the still man has to remember the fact that most magazine editors like to trim the pictures for their layouts ruthlessly. He's got to remember it especially if he's making stills for a Grandeur picture, where the stills will almost always be trimmed down to match the proportions of the Grandeur frame.

"The really important part of the still man's job, however, is to make his stills pictorially attractive, and at the same time tell a story with them. Every still must have a definite meaning. In other words, there must be a definite idea behind each still, and the composition of each still must be perfect, every time. The mechanical part of the job isn't so important, for if a still man isn't a good photographic mechanic, he's not likely to keep his job very long. But the artistic part of the work is different: the still man is often the only judge of that, and it's up to him to give his best photographic artistry all the time. This means that he's got to know composition thoroughly, and use his knowledge all the time.

Another example of putting atmosphere in the still

"I can't lay down any rules for composition. There have been too many laid down—and forgotten—already. The main thing is to know what story the still is supposed to tell, and then to go ahead and tell it as effectively as possible. If it does that, it will most likely be a well-composed picture. In studio work, working with a fine cameraman is a great help in this, for he will probably have the lighting and so on all arranged so that if you are worth your salt you can use it, practically unchanged, just as he does, to help your picture tell its story. The two of you can cooperate in telling the story of each scene in your own way, perfectly expressing the director's ideas. In the same way, working with a director who really understands the principles of artistic composition is a big help to the still man, for he won't have to spend nearly so much time in posing his people, the director will, in working out the scene, have eliminated most of the lost motion in telling the story of the scene. And, too, working with such a director is much easier, for he will take more pains with getting good stills. Mr. Murnau, for instance, always took special pains to check up on the composition of his stills just as he did on his movie shots. and he, more than any other director I know of, realized the value of getting the camera in exactly the right place. He would look through my camera, and, if he thought the composition could be improved, he would suggest moving the camera—say an inch or two one way or the other, instead of doing like so many of them, and saying, 'Hurry up, shoot the darn thing!' His work was always characterized by the way he expresses the mood of the sequence in every scene, and he knew the important part that the placement of the camera, and the composition of the picture, played in this, as the illustrations from two of his pictures, 'Four Devils,' and 'City Girl,' show.

"Another director it's a pleasure to work with is Raoul Walsh. I've just finished making the stills on his picture, 'The Big Trail.' You never get a feeling of working under high pressure with him; instead, you seem to be working as part of a very efficient machine, and just naturally fall into line with the progress of the picture. It's a funny thing—I even felt that way when I was jumping about like a madman trying to get the stills of the buffalo stampede, or the storm at the water-hole.

"But, nowadays, most of the big directors realize the importance of getting good stills, and are glad to cooperate with

Foreign Business Increases For Mole-Richardson, Inc.

COMMENTING upon their increasing foreign business, Mole-Richardson, Inc., announce the receipt of a large order for twenty-four inch incandescent Sun Spots from the Cinestudio Continental, Saint Maurice, France Cinestudio Continental is controlled by Paramount Publix Pictures Corporation.

Announcement is also made by Mole-Richardson executives of their recent affiliation with Venreco, Ltd , of London, England This will enable Venreco, Ltd , stage lighting specialists, to manufacture studio lighting equipment from Mole-Richardson designs, in the future Venreco, Ltd will also act as representatives and sales agents for Mole-Richardson, Inc , in England and on the continent Mr Mole states that this connection will greatly increase the sale of Mole-Richardson products in international fields

Mole-Richardson, Inc , designers and manufacturers of studio lighting, electrical and set equipment, produced the first incandescent lighting equipment for motion picture use

American Cameramen in Paris

TED PAHLE, formerly chief cameraman at the Pathe studio in New York, is presiding over the camera work in the German version of "The Letter," being made at the Paramount studios in Joinville, near Paris, under the supervision of Robert T Kane Dimitri Buchowetzki is directing "The Letter" Harry Stradling, who also was a cameraman at the Pathe studios, is photographing the Italian version of "Sarah and Son" at Joinville.

Phil Tannura, besides supervising all camera work at the Paramount plant in Joinville, acts as a sort of liaison officer and is kept so busy that he seems to be in two places at once

Another former Eastern studio man, Arthur Ellis, who was at the R-C-A Gramercy studio, has supervised the cutting of 20 features in seven different languages since he arrived in Joinville on June 4.

Kendall Kay is doing the publicity for the Joinville studio, and another familiar American name at the Paris plant is Horace Ashton Charles DeRoche, who acted in pictures on the Coast several years ago, also is directing at the Paris plant His present assignment is on the French version of "The Lady Lies"

R-C-A Total Installations Since June Reaches 180

INCREASED activity in R-C-A Photophone installations has sent the total number of theatres equipped since June up to 180, according to the company, which states that there are almost 2,000 devices installed in the United States and Canada. Edward Auger, assistant sales manager, is now on an extended trip to the newly created exchanges opened by R-C-A Sound Equipment, Ltd , in Winnipeg, Manitoba and Vancouver, B C. and Electrics, Ltd., Montreal

the still man if he will only cooperate with them Their individual methods may differ, but the thing for the still man to do is first, to learn how the director works, then just what idea he is trying to get across in each scene, and then to do his best in putting that idea across on the stills Some directors like to pose the stills themselves; some are willing to let the still man direct them himself: but, in any case, the still man's business is to know what story is to be told by each still, and then to tell it, as effectively and as artistically as he possibly can."

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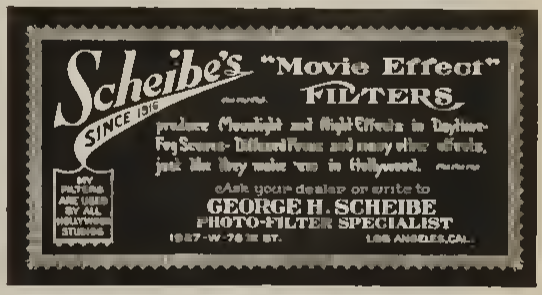
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Max Factor's Theatrical Make-up for the Stage

by **WILLIAM STULL, A. S. C.**

On the "Pan" Again

A FEW years ago a great camera manufacturer introduced one of the first 16 mm cameras to the public with the slogan, "What you see—you get!" This is a very catchy phrase, and (particularly as it was always accompanied by a picture of an attractive young lady looking intently at you through the finder) it was undoubtedly responsible for a good part of the early interest in that particular cine camera. But there is more to it than a mere sales tag-line; it is one of the basic facts of amateur cinematography.

Obviously, "What you see—you get!" But—what do you see? There is a question, indeed. How many times have you not noticed that, although you see one thing through your finder, you see quite a different version of it upon the screen of your projection-room? Take the matter of 'pans", for instance. One day on your vacation, you probably climbed to some eminence, and surveyed a landscape which almost shouted to your camera, 'Panorama! Panorama!" Obediently, out of its case came the camera. You wound it. You adjusted the lens for focus and aperture. If you were wise, you placed a filter in position. Then you raised the camera, clapped your eye to the finder, pressed down the release, swung the camera about over the view—and your panorama was transferred to more or less enduring film.

Came soon the day when your film had completed its travels through the mails and Mr. Eastman's developing machines. You threaded it through your projector, heaved an expectant sigh, and pressed the switch.

But what in the name of a little blue man is that on the screen? Surely, it can't possibly be your panorama of that lovely landscape! Look! It wavers, it jerks, it bobs up and down like a cork in a whirlpool, and to cap the climax, it rushes along so fast that you can make out nothing. Surely, either the laboratory man has made some hideous mistake in processing your film, or the camera maker has deliberately lied to you in saying, 'What you see—you get!"

How to See Through a Finder

But the trouble is not with Mr. Eastman's minions, nor with Mr. Victor's artisans. It is merely due to the fact that your eye does not see things the way the lens of your camera does—until you see the film projected. In the first place, you have probably surveyed that landscape three or four times with your eyes, **before** you start to photograph it. You **know**, subconsciously, what is there. So when you start to photograph it, you unconsciously hurry through it. In the second place, the lens of the camera takes in a much smaller portion of the landscape at a time than do your eyes. You can take in a great deal as you swing your head around in "panoraming" such a view; but, when you "pan" your camera at the same speed, the smaller angle of view embraced by the camera's eye, giving a larger image of a smaller field, tends to apparently increase the speed, and blur the image. This blurring is not due to the limitations of the camera so much as it is to this matter of angle of view. If you doubt this, look up from this page, and "pan' around you with your eyes; you will see perfectly. So far, so good; now, repeat the process, focusing your vision through the small circle made with your thumb and forefinger, held at arm's length; the result is exactly as blurred as the "pan" you made with your camera. You can see that you must slow the speed of your "pan" down greatly as the angle of your vision is decreased. The physical explanation is simple: in the first case, your eyes do not follow the movement of your head exactly; they move intermittently and slowly, stopping long enough upon each salient object to telegraph its picture to your brain. When you focus your eyes through the small circle, as in the second instance, you force them to move with your "pan"—too fast for them to consciously record individual objects. They can only telegraph a blurred report to the brain, for, to all practical purposes, the human eye is blind when in motion. Therefore, when making "pans" with our cine cameras, we must always take this into consideration, and "pan' slowly enough so that your eyes will have ample time to observe the details of the scene. But, in practice, our first purely visual "pans" of the scene will have given us a subconscious mental picture of the scene, so the only way to get properly timed "pans" is to not only make them slowly, but to make them at a rate that seems vastly **too slow.** Then they will be correct in the projection-room.

But this does not cure those equally unpleasant waverings and bobbings. These are mute evidence that the camera was not on a firm foundation during the course of the scene. Every heart-beat and breath moved us—and the camera a slight fraction of an inch, not much, but enough, when magnified through the angular field of the lens, and the enlargement of projecting, so that the camera seems to be pitching as though on a heavy sea. Try as you will, you cannot hold a camera absolutely firm. The only answer is a tripod. It has neither heart to beat, nor lungs to breath with, therefore it is absolutely firm. Cine cameras are comparatively light, so the tripod need not be a heavy one, although the extra weight, strength, and length of the larger tripods is a very important advantage; but even a small, still-camera tripod will do. Of course, for 'pans", you will need a panoramic head, and for vertical "pans" or "tilts," you will need a proper tilt-head; but a good tripod is the only guarantee of rock-steady pictures that is yet known. People have often asked me, 'Why is it that most 16 mm pictures I have seen screened are so unsteady? Can't one make steady pictures with an amateur camera?" To this, the only possible reply is that almost any amateur camera will make steady pictures—if it is mounted on a tripod. Of course, it **is** troublesome to be always screwing and unscrewing camera and tripod, but with the various "instant-connectors" now available, this excuse no longer holds water; you've just got to use a tripod to get respectably steady films. And, if this be advertising for the tripod makers—let them make the most of it! To anyone who has used a camera over a period of years, it is merely good, common, cine-sense.

Pan-and-Tilt Logic

Another important thing to remember in this connection, is that if one is going to "pan" or "tilt", it must be done logically. Everything must have at least a beginning and an ending. Now, where is our "pan" going to begin, and where will it end? This must depend upon the meaning of the scene. And every scene must have a meaning. It must have some story to

(Continued on Page 33)

Professional Amateurs

"My Filmo Is My Easel and Sketching Outfit" says Wesley Ruggles

by **WILLIAM STULL, A. S. C.**

THE week immediately before a director starts the cameras clicking on one of the biggest productions of the year is hardly an ideal time to seek an interview with him No one who has not had the misfortune to be intimately connected with such a last-minute rush can imagine the maze of intricate artistic, technical and executive details in which a director is enmeshed in those last hectic days before production is actually started This condition applies to even the most ordinary programme films—but when the picture is such a vast thing as "Cimarron," with its huge cast and million-dollar budget, words are futile. None the less, when this writer sought out Wesley Ruggles, who is guiding the destinies of that picture, the unexpected happened, for the subject of the interview—amateur cinematography—was far too close to Mr. Ruggles' heart to be postponed on any account

For Mr Ruggles is a **Filmo**-enthusiast of the first water It may seem like the proverbial busman's holiday for a busy motion-picture director to spend his off-hours making personal movies, but Ruggles does so, not only because of the boundless benefit which he finds his professional work reaps from the hobby, but because it really **is** a hobby to him, and spells, as it does to so many other cine-amateurs whose only connection with professional movies is through the theatres, pure enjoyment.

Mr Ruggles' personal cinematic interests are among the most diverse that this writer has thus far encountered. Of course, like all amateurs, Mr Ruggles has used his camera to provide him with intimate, **living** records of his friends—and as among these friends are numbered the majority of the film great, his cinematic album contains scenes which may well be the envy of any movie "fan" He has photographed every important personage on the R-K-O "lot," and many others at the various studios where he has worked In fact, in one reel which he photographed during a recent week-end holiday, he has included more stars than have appeared, in any professional film ever screened—or likely to be!

But this is only the smallest of his cinematic activities, for all is grist that comes to his mill.

"My **Filmo**," he declares, "is my easel and sketching outfit, my notebook and pencil and camera all in one I carry it just as some people carry notebooks or sketch-blocks The movie camera has for this sort of use one supreme advantage over sketch-books or still cameras, for it not only captures line and form, but living motion And it is frequently the motion of a person or object which most completely characterizes it Therefore—my **Filmo** There's something I want to remember. I photograph it Here's something beautiful: my lens captures it I have an idea for a striking photographic effect I get it with my **Filmo**—and, once I've got it, the film is a fuller, clearer description of it than all the notes in the world Before I got the camera, I know I must have—like many other directors—tried the patience of my cameramen sorely, for while I might have a clear mental picture of such photographic effects, I might also have the very dickens of a time in getting it over to the cameraman whom I wanted to embody it in a production for me Now I have the effect already done (as well as an amateur is able to, at least suggested) on my 16mm film I show it to the cameraman, and there you are! He can see for himself just what I want, so he can go about duplicating it professionally without half the doubt and trouble he'd endure if I merely tried to describe it to him He knows I'm not just springing 'some hare-brained director's notion' on him—and I know that I'm not asking him to do the impossible, for I've tried it out myself beforehand.

"For my purely amateur work, I think that dogs and boats are my favorite subjects They are fascinating subjects even in the motionless media—sketches and still pictures—but when you use a movie camera, they offer endless possibilities The motion of a boat is something of limitless interest. Just consider the range of subjects. the grace and charm of the

Mr Ruggles photographs his cast and assistants in "Cimarron" with his Filmo

sailing yacht; the dynamic thrill of the spray-swept speed-boat, the majestic might of the liner or battleship.

'Then, consider dogs Any dog-lover (and most of us are) will realize that the things which most endear the animals to us are their little mannerisms—motion again The joyous body-movements and tail-wags, the little, fleeting facial expressions when they are pleading, or ashamed, the cock of the head, the set of the ears, when they are listening for familiar voices or footsteps—none of these can be fully reproduced except through the moving picture

"Horses are, photographically, a good deal the same People comment on their humanness, and painters and still photographers try to portray it, but, here, again, motion is a vital factor And, too, when speaking of motion, what is a more perfect example of the much-lauded 'poetry of motion' than a horse—or dog—running? And how can you better show this than by slow-motion films of them? Here is a detail in which the multiple speeds of my **Filmo** are invaluable.

"Athletic meets—particularly football, diving, and track events—are also in this same class, for with a movie-camera you can slow them down until the interesting, and often beautiful, phases of the motions can be readily seen

"The ocean itself offers yet another opportunity for abstract, pictorial studies of motion The surf, even on the sandy beaches around my Malibu beach-cottage, is endlessly different, and always fascinating And as for the great breakers of the more rocky shores—what can't a cinematic experimenter do with them!

"But, strange as it may seem, I also find a considerable fascination in such immobile things as houses There is always something fascinating about well-conceived architectural 'stills'—but cinematographic treatment of these subjects can be, I think, even more interesting You can, through such devices as 'pans,' tilts, and lap-dissolves, show not only the interesting details of a building, but their relation to the whole.

"Of course, to attempt such abstract, experimental film work as this with any degree of success, you need a very complete outfit I've found my battery of telephoto lenses most incredibly useful, and I'm sure that I couldn't have gotten on at all without a full supply of filters, diffusers, and so on

"It's amazing, too, what interesting trick-shots you can make with such a relatively simple camera as a **Filmo**. Of course, you can't expect to rival the professional tricksters, with their elaborate equipment, but a first-class amateur camera will allow all the trick work, double-exposure, and so on, that an ordinary amateur is capable of I know that I've done more than a little of this sort of work with my camera—and I've not nearly exhausted its possibilities When I've more time, I'm going to do still more of this fascinating work, including some photo-micography

"There are so many excellent home-talkie reproducing outfits already that I am sure there will soon be some practical recording devices available for the amateur When there are, I anticipate a lot of pleasure in making my films interesting audibly as well as visually

"But I find that my **Filmo** is not only useful as a recreation, but professionally, as well Many of the ideas I've used in my professional productions have had their origin in some of my 16mm stuff.

"There's the matter of locations, for instance. When I travel, the **Filmo** goes with me, and if I see places that might possibly serve for backgrounds for a professional film, I get a

Mr. Ruggles shoots own tests with his Filmo

few feet of it for my private, 16mm location library

"Another important item is capturing interesting types, which might serve as a basis for the characterizations of some of my actors Interesting mannerisms, expressions, or oddities of dress and feature, you know, are always valuable For this sort of work that little device the Bell & Howell people call the 'prismatic eye' is immensely useful, for it permits me to get my 'victims' unawares, photographing them at right angles to the direction in which the camera is ostensibly pointed

"Then there is the vastly important matter of informal tests of my actors and actresses Of course, the major tests are always done by regular cameramen, on 35mm film, but my informal tests, made by myself on 16mm film are valuable because I can take them home with me, and run them on my own projector, to study them at my leisure On this picture, 'Cimarron,' for instance, I shot many reels of such tests just so I could study them this way There were, for instance, all sorts of costume and make-up tests of Richard Dix, who plays the lead, of the more important applicants for the difficult feminine role of Sabra', and of most of the principal players in the picture The action of the story, you know, covers several decades, which gives us all sorts of problems to work out in regard to make-up, costumes, and characterization By making a lot of these tests on 16mm film, we have an unusual opportunity for studying them, for we can run them at home, and analyze all the details much better among these congenial surroundings than we could in a busy studio projection-room

"This, by the way, has taught me a vital lesson in my amateur work the importance of a systematic way of filing one's films If you have a definite place for every reel, you can be certain of having each on hand when you want it, you will know just what condition it is in, and—most important of all—you will be able to run your programmes off without a hitch, with professional snap and accuracy, which is the surest way of creating a favorable impression upon your audience"

Business Improving

INDICATIONS of an early business revival are pointed to by the large number of contracts received recently for Western Electric Sound System installations The total number of installations, according to the latest report, is 6383 of which 4,304 are in the United States and 2,079 in the foreign field

The number of installations where Western Electric has replaced other types of equipment now total 1,217 of which 1,014 are in the United States and 203 in foreign countries

Seventy-three contracts for installations have been received by Electrical Research Products within a very short period, the number showing an almost equal distribution between theatre chains and small operators

Ten installations have been ordered for the Fox West Coast Theatres at the following houses the Lyric, Salem, Illinois, the Orpheum, Marion, Illinois, the Fourth Street, Moberly, Missouri; the Palace, Eldorado, Kansas, the Tackett, Coffeyville, Kansas, the Cozy, Dodge City, Kansas, the Hippodrome Herrin, Illinois, the Hippodrome, Murphysboro, Illinois, the Jefferson, Springfield, Missouri, and the Empress, Ft Scott, Kansas

Warner Brothers' Granada Theatre at Milwaukee has also contracted for Western Electric installation

The list also includes three Publix houses, the North State at Goldsboro North Carolina, the Empire at Mercedes, Texas, and the Palace at El Paso, Texas

To Own an ANNUAL
is to KNOW that which is KNOWN
by those
best qualified to KNOW.

New Talkie Process by Spoor

A new process for making talking pictures by mechanical instead of electrical means, based on entirely new principles, has been announced in New York by George K Spoor, pioneer in the motion picture industry and co-inventor of the recently announced stereoscopic natural vision camera

Instead of converting sound into light and then back into sound again by means of photo-electric cells, amplifiers and other electrical devices employed in the industry from its inception until the present, the new process, to be known as the intersound system, actually carves sound grooves by purely mechanical means on the photographic film, resembling the grooves on a phonograph record A small 'pick-up" device on the projection machine, with a sapphire roller, acts in the capacity of the phonograph needle to transfer the sound to the loud speakers in the theatre

At the same time the inventor revealed that he is engaged in perfecting a process for taking color pictures which he expects to be a vast improvement on the present methods The new system, he said, would make it possible to get what is known in the industry as "critical resolution," giving sharpness to the background of the picture as well as to the foreground and the middle ground The present methods, he said, produce a 'feathery," out-of-focus back ground

The first step in the new sound engraving process, the inventor said, is the making of a "master record," which is carved on plain, not emulsified, celluloid, at the same time the photographic negative is being taken From this master record, when the photographic positive prints used in the theatre are completely assembled, the sound record is engraved into the edge of the positive prints by means of an engraving machine which reproduces the master record faithfully in every respect

"By placing a roll of clear celluloid," said Mr. Spoor in describing the new process of manufacture, "upon a disk and passing it over a sprocket drum into another receiving disk, the record is carved into the edge of the film, while it passes over the drum, with a steel knife point, which is actuated by the vibrations of the microphone This produces the master record

"The duplicates from the master record are also made by mechanical cutting means"

S. M. P. E. Growth

UNUSUAL growth has been experienced this summer by the Society of Motion Picture Engineers Eighty-four new members have been added to the membership since May 1 The International influence of the Society is shown in the fact that 28 of these new members are from foreign countries

Residences of the new members, according to countries, are as follows United States 56, England 11, France 3, New Zealand 2, South Africa 1, India 2, Scotland 1, Poland 2; Norway 1, Germany 2; Japan 2; Brazil 1

With the large increases in membership which the Society has been making for the past few years, and with the unusual gains in membership for this year the Fall Meeting to be held at the Pennsylvania Hotel October 20-23 is expected to break all attendance records

British Color Process Sought by Warner Bros.

WARNER BROS are understood to be interested in a new color process perfected by Cinecolor, Ltd, British company Five cameras are believed to have been sent to New York for experimental purposes The color process is said to use filters and panchromatic black and white film stock and is developed in the same way as ordinary film without any additional cost

Amateur Movie Making

(Continued from Page 29)

tell Otherwise, it had better not be shot. Like the character in "Alice in Wonderland," who insisted that a well conducted creature never dreamed of going anywhere without a porpoise, no well conducted film scene should go anywhere without a purpose Merely letting your lens rove aimlessly around a landscape is rank extravagance Therefore, before you start any scene, and particularly a moving one, such as a horizontal or vertical "pan", you should know just what you want to include in that "pan", and just why, and how Let us say that you are hiking You are in a canyon, just below a picturesque waterfall Now, before you start to shoot that fall with your **Filmo**, decide what is going to be the message of your scene Is it going to be the canyon, or the fall? If it is the first, you can make the fall merely a decorative incidental by, let us say, "panning" up from the floor of the canyon, past the top of the fall, to the sky-line far above On the other hand, if your camera is to be most interested in the fall, the depth of the ravine is merely incidental· therefore, "pan" upwards from the foot of the fall to the top of the fall—not to the top of the canyon—and hold it there for several seconds before you cut or fade out. Here, again, a tripod is invaluable, for you can set it up and rehearse your "pan" once or twice, studying it through the finder, as you will later study the scene on the screen When you have gotten your cinematics exactly right, you can duplicate the movement perfectly in the scene itself

Fading Out

"Fades" are always an effective device for commencing or terminating such scenes as these They are simple enough to make, too And if, in editing your film, you find that they are not necessary, they can always be cut out For the amateur, probably the simplest device of this type is the "Iris" or "Circle" in or out. Several manufacturers have marketed inexpensive devices for doing this they consist merely of an extension lens-hood (which, in itself, it always handy), with an iris diaphragm at the far end This diaphragm, unlike those on most lenses, closes completely And as it is located several inches in front of the lens, it gives the effect of the picture being blotted out by a black mask with an increasingly small opening in its center The distance separating the iris from the lens determines the relative sharpness of the edge of the circle, as the distance increases, so also does the sharpness of the circle This effect is easily achieved, if a tripod is used, for one hand can be used to press the release of the camera movement, the other manipulating the iris

The true fade, however, is somewhat different, for it is a gradual, uniform darkening of the picture until the scene vanishes in almost total darkness. This is done by slowly decreasing the exposure received by the film In professional cameras it is done by decreasing the angular opening of the shutter; but as in amateur apparatus, the shutter-opening is fixed, fades must be made—as they once were in professional cameras—by closing down the lens. This is not difficult, even though the average lens will not close to a really small stop For most purposes, the lens can be closed to its minimum aperture, and then capped, by slipping the palm of the hand directly over the lens for a few seconds This is not at all difficult to do the only difficulty is in the proper timing of the fade A fade may be made quickly or slowly, as the nature of the scene may require The average fade should take about five seconds, which though it may seem like a short time, is yet an appreciable interval in the actual doing Therefore some little practice with an empty camera is a prudent thought Fades may also be made by various other means, such as heavily graduated ND filters, and the like, while on negative film they may, too, be made by chemical means, in the laboratory But the most effective fade for amateur use is the simple lens fade Once this little trick has been mastered, it is wise to make a practice of invariably fading into and out of all scenic shots The extra footage consumed is negligible, unwanted fades can always be cut out without much waste—but needed (and missing) ones can never be inserted in a reversal print Here, as in most other parts of cine camerawork, a little forethought is a tremendous help to quality results.

UFA 16 mm. Films Now Distributed by Bell & Howell

MORE than 120 super-educational 16 mm films from the famous Ufa Studios have been added to the Filmo Library of the Bell & Howell Company In line with the great interest being shown in 16 mm. talking pictures, 52 of these films have sound-on-disc accompaniment in the form of lectures by outstanding American educators Practically every field in the scientific and educational world is touched by these talking pictures—animal, bird, under-sea and insect life, astronomy, geography and travel, botany, etc

The following are typical of the sound subjects: 'Killing the Killer" (A mortal combat between a cobra and a mongoose), with accompanying lecture by Paul G Mann, Associate in Education at the American Museum of Natural History, New York City; "Bella Napoli" (Naples, Vesuvius and Capri), with lecture by J. J. Quinn, of Boston Teachers' College, "A Jungle Round-up" (Animals of the Amazon Valley), with lecture by James C. Adell, John Hay High School, Cleveland, Ohio The sound pictures are on approximately 400 feet of film

The silent Ufa films are likewise well adapted for American classroom work. A number of them have advanced as well as elementary titles.

Ufa has startled the photographic world with its surpassing photography, and these new Filmo Library offerings reflect the tremendous artistic achievements of Ufa just as certainly as do this organization's greatest professional theatre productions

In addition to the Ufa films, the Bell & Howell Company announces as now available twelve entertainment sound-on-disc pictures, as follows. "That's Funny", "The Happy Ranch Boys", "The Dizzy Four", "Bum Business", "The Lion's Roar", "The Cuckoo Nuts", "The Wise Crackers", "The Royal Flush", "Irish Romance", "Gypsy Troubadours", "Gypsy Melodies", and "Down in Dixie". These subjects are all released in 16 mm film The length of film is approximately 400 feet Also four 16 mm Felix the Cat animated sound cartoons have been added to the Filmo Library listings These sound pictures make the inimitable Felix more interesting than ever

All of the Ufa sound pictures and the other sound pictures noted above, are admirably suited for the Project-O-Phone, the portable sound movie projector which was recently announced by the Bell & Howell Company

Eastman Buys Gelatine Plant

THE Eastman Gelatine Corporation, a newly organized Massachusets subsidiary of the Eastman Kodak Company, has made a contract with the American Glue Company for purchasing the gelatine plants and business of the American Glue Company This information is contained in a communication sent to stockholders of the latter company, calling a meeting for September 4th for "further ratification and approval" of the transaction

The glue business of the American Glue Company is not affected by the contract, and that company will also retain all of its cash and accounts receivable The transaction encompasses plants, inventories, brands, good will, and other similar assets pertaining to the gelatine departments of the business.

The Eastman Kodak Company already manufactures gelatine, one of the most important raw materials of photographic film, paper, and plates, in Rochester and in Germany Purchase of the new olants will provide a substantial additional supply

Making Movie Titles

Some Suggestions for the Amateur from a Famous Professional Title-artist

by **VICTOR N. VANCE**

(Head of Art Title Department, Warner Bros. and First National Studios)

CONSIDERED artistically, there is considerable similarity between motion picture photography and title-making. Both are vitally important in properly telling the story, whatever it may be, which is the **raison d'etre** for the picture. Both must obey certain similar artistic laws regarding composition and tonal gradation. And both, to be artistically successful, must be inconspicuous. They must get their message over without calling attention to themselves. If either the artistry of the photography, or the physical make-up of a title is so obvious as to be more noticeable than the story of the picture, it is bad.

Most of us remember the atrocious titles of the earlier pictures, and the equally atrocious "Art-titles" that followed them a few years later. Both were violently distracting. They screamed, "Look at me—I am a title!"—and let their dramatic message go hang. Their makers had not yet learned that a good title must be, literally and optically, an inconspicuous part of a perfectly-coordinated whole.

In the latter years of the silent picture, however, this order passed, and the producers learned that title-writing and title-making demanded just as much thought and artistic ability as any other part of the picture. This same condition applies even more forcefully to the rare titles in today's talking pictures, and, naturally, to the titles used in the silent films made by the non-professional camerist.

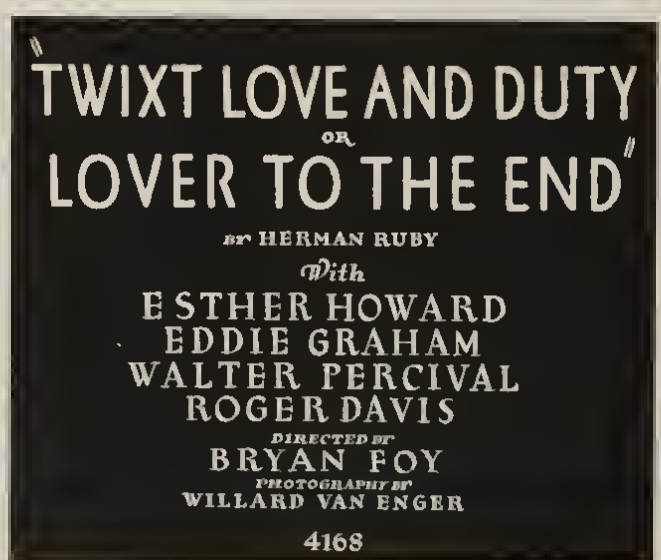
Unfortunately, however, titles are probably the least-considered part of the average amateur film. Photography is naturally the part upon which the greatest attention is concentrated, not only because it is the most obviously necessary part of film work, but because it is done while one is in the spirit of the thing—buoyed up by the enthusiasm of his own interest and that of his friends. Editing, too, receives its good share of attention, because it is a fascinating work, and probably because it is often so obviously necessary in order to get the film into such shape as will justify the enthusiasm and hopes of the filmers. But title-making is a different matter. It is exacting work, and often of a nature quite foreign to the average user of an amateur camera.

Yet title-making need not be particularly difficult. One need not be a highly-skilled lettering-artist to produce acceptable amateur titles. The principal thing is to have patience, a firm hand, and enough mechanico-artistic ability to lay out the lettering in such a way that the words are legible and well grouped. Practice will develop the skill needed to do perfect work; and, unlike a photographed scene, which cannot always be retaken, titles can be remade as the individual's skill increases, until even the earliest pictures can be embellished with perfect titles.

All that is needed for the making of satisfactory amateur titles is a drawing-board, a T-square, a small lettering-brush, some good, opaque water-color paint, and a few cards of the proper size upon which to write the titles. These cards may be either black or white, depending upon the type of film used. The most satisfactory title is one which appears upon the screen as a black background with white letters. The cheapest way to secure this effect is to use a white card with black letters, and photograph it upon positive film, using this film as the finished title. However, far more satisfactory results are secured by using black cards, with white lettering, and photographing them with either positive film, which is used as a negative, or with ordinary Orthochromatic reversal-film. Of the two, the former method is preferable, as it not only gives the advantage of duplication, but also produces a more contrasty print. Furthermore, the use of black cards and white lettering simplifies the work of making the title-cards to a great extent.

Having, then, decided on a black card, with white letters, let us see how the title is to be made.

We must assume, of course, that the wording of the title has been determined. Therefore we need not say more about that than that the best title is invariably the brief one. It is easier for the amateur artist to letter, and—which is more important—easier for any audience to read.



A good example of a title card

Then we come to selecting the card. It should have a flat black matte surface. In addition, I always paint my cards with a smooth coat of show-card black. This is quite important, for it gives a far blacker black than any paper manufactured can give. In comparison with a painted card, any ordinary black card is noticeably gray. It has an appreciable photographic value, while the painted card has none.

These cards should be amply large in size. This not only allows for larger lettering—

which is easier to make—but allows the card to be set farther away from the camera, in photographing, which makes the whole matter of focusing and lining up the camera easier. The card shown in the illustration, which is the main title from a Vitaphone short subject, measures fifteen by twenty inches, and the smallest letters are three-sixteenths of an inch high, while the largest ones are an inch and a quarter high. This card is slightly larger than the actual area covered by the camera, therefore, I use a white cardboard mask, cut away to exactly the area covered by the title-camera. Upon this mask I have marks which show me exactly the centre and quarter points on each side, and also guides for the spacing of the letters—provisions being made for several sizes of lettering, giving four, six, nine, and twelve or more lines to the card.

Having placed the card upon the drawing-board, and slipped the mask over it, the next step is to rule the card for the various lines of lettering which will appear on it. Here is where the advantage of using a black card shows up. This ruling, and the preliminary blocking-out of letters is done in white chalk, which can be wiped off with a piece of cloth when the final lettering is completed. For this blocking-out and ruling, I use hard, white chalk, which I whittle down to a wedge-shaped point with sandpaper, just as a draughtsman sharpens his wedge-shaped pencils.

It is vitally important to make your preliminary lay-out in this manner, before you start your final lettering, for only in this manner can you be sure that your lay-out is balanced properly, that the letters and words are spaced right, and that they are going to be large enough to be legible.

Once this preliminary lay-out has been made and corrected (if necessary), you can begin the final lettering. This is done with a fairly fine lettering brush (I use a No. 0 myself) and any good, opaque white water-color lettering or show card paint. This lettering need not follow the preliminary blocked-in letters absolutely, but should be built up upon them, using them as a guide to making the most perfect and finished job of lettering of which you are capable. Any minor mistakes can be "erased" by blocking-out with the same dead black paint with which the card is covered, and then continuing as before with the white paint. Obviously, each of these applications should be allowed to dry thoroughly before the next is made!

When the final lettering is done, the paint should be allowed to dry thoroughly. Then the chalk ruling and guide-letters should be wiped off, and the card is ready for photographing. After having been photographed, the lettering may be washed off with plain water and a cloth or sponge, the card dried, repainted, and used again and again.

Now, a word as to the letters themselves. Choose a style of lettering that is easy to make, firm, and legible. Make your letters large, but not too large. Use capitals and lower-case letters just as you would in any other writing. The first letter of a title, however, should be a bit larger than usual, like the so-called "Initial Caps" in a book or magazine. In the main title of a picture—the card that carries its name, that of the producer, director, cinematographer, featured players, etc., it is generally better to use upper-case letters (capitals) exclusively. The main title is like the headline of a newspaper it must say as much as possible in the minimum time and space. Therefore use caps exclusively.

As regards timing titles, the professional standard is to allow two and one-half feet of film (35mm) for every three words. Reduced to its 16mm equivalent, this standard would be approximately eight words to the foot.

But some titles may allow—or even demand—a slightly more decorative background than the conventional black card. In a dramatic film, these usually occur at the junctions between sequences, when the train of thought of the audience is slightly changed, and when a decorative background to an explanatory title can be used as a sort of atmospheric prelude to the coming action. In the studio we make these by double-exposure, which is, generally speaking, beyond the range of

(Continued on Page 36)

New

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Making Movie Titles

(Continued from Page 35)

the average amateur This procedure is necessitated by the fact that we have two very distinct photographic problems first, we must get the delicate, low-key gradations of the background—which must be confined to a rather limited scale of dark grays; and secondly we must still preserve our brilliant, white lettering, which must be no less legible from being superimposed upon an art-background. If we made the two at a single exposure, we would either "burn up" the whites, in order to get the delicate grays, or we would simply not get the grays at all, though we got the whites Therefore, we double-expose, giving each a perfect exposure

Clearly, few amateurs would care to do this However, there are several ways of getting decorative or atmospheric backgrounds behind white-lettered titles The simplest way is to use some dark-toned, but decorative material for the background. Mottled-finish cards, dark-colored wall-paper, or imitation monks-cloth will do, and furnish hundreds of interesting patterns Then, for a more atmospheric background, one may use a photograph, printed on buff stock, and exposed and developed so that there are no tones in it higher than a rather dark gray If there were pure whites, the design would conflict with the white letters, and, if the two happened in any place to be superimposed, obliterate the letters entirely. Similarly, a rotogravure or fine-screened halftone illustration may be used.

For family films, line-drawings of the cartoon type may often be used to good effect, especially in comedy sequences It is not advisable, however, to have such drawings or any decoration at all, in fact, on spoken titles. Such titles should be made simple, optically, as any other type would tend to slow up the progress of the story, and to unnecessarily call attention to the fact that your film is a silent, rather than a talking picture

In titles indicating a lapse of time or space, it is a good thing to fade out, and sometimes to fade in as well Fades can be made with the lens in most amateur cameras, although the trick takes a little time for learning. There are also, I believe, special graduated "Fading filters" made

One final word to the amateur title-artist: always keep your materials in the best of condition Keep your brushes and paints in a definite place, and **clean.** The average title-brush will last a long time, but, when you think that it is worn out, don't be afraid to get a new one You will probably be able to feel it when your brush is worn out: it will not follow your curves, etc., as it should, it will not point properly; and, in a word, it simply won't behave any more Make it a point to file your title-cards away until you are sure that they won't be needed again Have enough so that you can do this, and still have plenty to work with, and a good number in reserve Last of all, always remember that a good title must not be conspicuous It must be legible, but, strictly speaking, it should be so made that it is more sensed than consciously read And never let a title deliberately call attention to itself as a title!

De Forest Tells of Home Talkie Plans

PERFECTION of audible motion pictures for the home on 16-millimeter film, which can also be utilized for industrial and educational purposes, is coming soon, it has been said by Dr Lee De Forest, inventor of the radio tube.

Dr. De Forest also announced that arrangements have been completed for the establishment in Los Angeles of a radio and audible pictures apparatus manufacturing plant with an investment of $500,000

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ANYONE who wants to know how strong the new Bell & Howell 16 mm Tripod is, may figure it out from the above picture Here we see a 240-pound gentleman supported by the 4½-pound Filmo tripod It speaks for itself

Studios Show Best Work

FOR their information in voting on the award of merit for sound recording quality, to be given for the first time this year, members of the Technicians' Branch of the Academy of Motion Picture Arts and Sciences heard a special exhibition of selected reels from various studios Wednesday evening, August 27th.

The award for sound recording is one of nine annual awards for distinguished achievements in different branches of motion picture production which will be conferred by vote of the Academy membership in September

The exhibition reels were chosen by the studio sound departments as representing their best recording for the past year Sequences from the following pictures were exhibited United Artists, "Raffles"; Warner Brothers, "Gold Diggers of Broadway", Columbia, "Rain or Shine", Caddo-Metropolitan, "Hell's Angels' , RKO, "The Case of Sergeant Grischa"; First National, "Song of the Flame"; Paramount-Publix, "The Love Parade"; Metro-Goldwyn-Mayer, "The Big House "

'This exhibition and the forthcoming award of merit mark a milestone in the development of sound recording in Hollywood," Colonel Nugent H. Slaughter, chairman of the Technicians' Branch, stated 'The purpose of the award is to stimulate better recording among all the studios and not solely as a distinction to the studio upon which it will be conferred "

The exhibition was held at the Paramount Studio Theatre.

Harris Sues Dunning

S L HARRIS, under the name of the Associate Process Company, has brought suit against the Dunning Process Company, alleging infringement on the Dawley Patent which Harris claims is owned by him He asks an accounting of profits and a restraining order alleging Dunning Company uses methods covered by Dawley patent-

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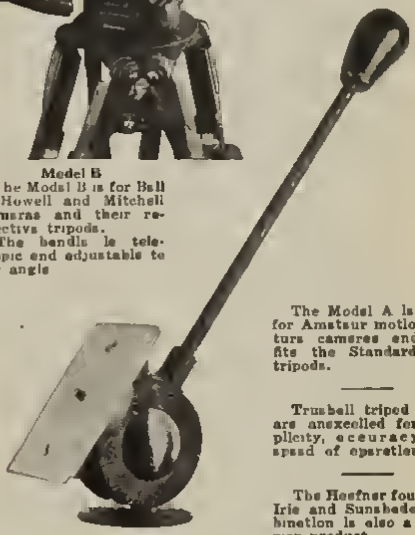

The Model A is made for Amateur motion picture cameras and also fits the Standard Still tripods.

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Survived Where Human Life Perished!

SMASHED and bent by the terrific crash that killed five Kansas City men recently near Arkansas Pass, Tex., this camera was recovered from the wreckage. Although a hammer and chisel had to be used to open it, the film in the camera not only was barely damaged by light, but about fifty feet of it resulted in excellent photographs of the few minutes before the tragic termination of what was to have been the homeward air voyage. About half the reel of film had been taken by R. J. DeLano, one of the five, but only about one foot of the exposed portion had been damaged. The several scenes taken from the plane as it headed northward to tragedy disclosed that heavy clouds lined the route, which, however, did not appear as storm clouds in the motion pictures. The photograph of the camera was made here today by Lawrence Hanley, proprietor of the Hanley Photo and Radio Shop.

Lakin Ventilating System for New Universal Laboratory

ADVANCED and modern features in construction will be introduced by Lakin Corporation in the installation of the heating and ventilating system for the new Universal West Coast laboratory.

Laco Corporation is accredited with having installed its heating and ventilating systems in many of the Southland's most prominent structures.

Aluminum Casting for Dietz Reflectors Weighed 300 Pounds

CHARLES M. HALL, forty-years ago discovered a process by which aluminum could be made practical.

Years of discouraging effort passed before he found men with enough confidence and courage to carry out his plans. He lived to see the world adopt aluminum as a common metal.

One of the largest pieces of solid aluminum ever produced, recently was specially cast for Lakin Corporation.

This casting, weighing more than 300 pounds, is to be employed in the development of the new 36-inch Dietz reflector, to be handled exclusively by Laco Corporation.

In the development of this reflector, the builders of Laco Lites again have demonstrated their ability to produce the latest and most scientific products in lighting apparatus for the motion picture industry.

From the aluminum foil around a pack of cigarettes, which weighs practically nothing, to an aluminum casting which weighs more than 300 pounds, give one a fair example of the diversified uses for this metal.

These Smiths!

FIRST, Lowell Smith led a group of Army planes on the first flight around the world Now his niece, pictured above, the daughter of Dr Lloyd Smith, San Bernardino, Calif., has taken up the business of home movie making with a Cine Kodak in a very serious manner, as you all can see

The Stanrite Tripod

A NEW product called Stanrite Tripod has just been put on the market by the "Testrite Instrument Company" of New York, and is meeting with considerable success according to advice received from the Movie and Photographic stock houses

This new device, (pat app for), has been produced for the purpose of moving picture cameras of all makes, and has special features, such as:

Quick clamping arrangements, adjustable legs for all angle tilts, and is very attractively finished, all metal parts chromium plated, and has highly finished Mahogany double section wood with chromium plated metal legs that are reversible, weighing three and one-half pounds, making the tripod very light for carrying purposes, which folds up to 22 inches, and opens to a height of 55 inches.

The Remarkable Panrite Universal Tilting Top, known by all the photographic stock houses, has finally found a sturdy support, such as the Stanrite Tripod produces

British Merger

STOCKHOLDERS of the British Filmcraft Productions have agreed to an amalgamation with Audible Filmcraft Co., the new company to be known as Audible Filmcraft, Ltd Basis of the merger provides that the new company acquire the assets and pay and discharge the liabilities of British Filmcraft Studios of the company are expected to be rented to American producers

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c/o A. S. C.

Filmo Camera With Critical Focuser

TO GIVE the amateur movie-maker the same precise focusing facility that the professional cameraman has had at his disposal in the Bell & Howell standard studio camera, this company's engineers have designed a Critical Focuser for the Filmo 70-D home movie camera.

This unit includes all the advantages of the professional camera focusing system and, further, gives an even greater magnification of the image—a magnification of 25 diameters This magnification is of great help because the minute details of the object to be photographed are thus rendered clearly visible and can, therefore, be brought to a critical degree of sharpness with the least effort on the part of the operator

The Critical Focuser permits the operator to focus any focusing mount lens visually upon any subject at any distance from the camera In other words, it relieves him of the necessity of measuring distances and eliminates guessing distances, which has heretofore been the commonly used method of determining the setting of the lens focusing dial

This new focusing device is a built-in feature of the 70-D Camera, being incorporated in the camera head, and cameras so equipped are distinguished from others by the designation Filmo 70-DA The 70-DA Camera is the same in all respects as the Filmo 70-D except that it has the new focusing feature

Owners of 70-D Filmo cameras may have the Critical Focuser installed on these cameras at a nominal price by sending them to the factory

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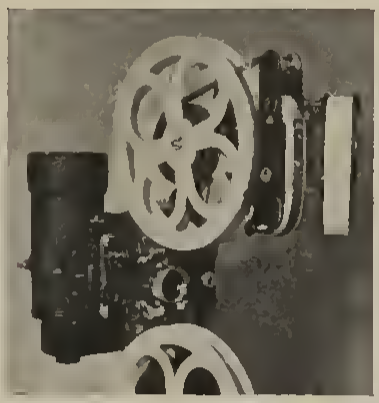
New Device Cleans Film As It Goes Through Projector



AMAZINGLY simple and practical, a new device for automatically cleaning 16 mm motion picture film, as it is being projected, is announced by the Bell & Howell Company No longer will the home-movie projectionist need to clean his film laboriously and ineffectively by hand

The B & H Film Cleaner, as it is called, not only prolongs the life of film by removing grease, oil spots and dirt, but the new screen brilliance, resulting from film scientifically cleaned is a tremendous factor in securing perfect projection

This new device, which weighs only 14½ ounces, is quickly attached to a Filmo Projector, and is as quickly detached The film is thoroughly cleaned on both sides as it runs through a pair of tapes moistened with "Filmoleen", an especially prepared cleaning fluid Under well-regulated pressure, the dirt and grease are automatically wiped off Then in passing through the projector mechanism, the film becomes perfectly dry before it reaches the take-off reel Clean tape is brought into place at a turn of a knob whenever the old tape gets dirty A three-foot roll of tape is supplied for each side of the cleaner—enough to clean many feet of film

The B & H Film Cleaner is a Bell & Howell engineered product throughout and comes from this company's new engineering laboratory

Early Equipment Wanted

APPEAL for examples of early motion picture equipment of all types is being made by the Museum of Science and Industry of Chicago, in which one of the most complete historical exhibits of the picture industry will be housed It is the purpose of the museum to trace the evolution of the motion picture from its primitive beginnings to the present day

Equipment relics of the past will be welcomed by John A Maloney assistant director of the museum, with offices at 300 West Adams Street, Chicago The Museum of Science and Industry is the result of an endowment of $3,000,000 by Julius Rosenwald, Chicago philanthropist, and a $5,000,000 bond issue of the South Park Commissioners of Chicago for the reconstruction of the old Fine Arts buildings in Jackson Park, which will permanently house the technical collections of the museum

Film Exports Increase

FILM exports to all countries for the first six months of 1930 increased 23,122 221 linear feet over the same period of 1929, according to preliminary export figures issued by the Department of Commerce, M P Division During 1930, 144,932 674 linear feet of American sound and silent film valued at $4,127,172 were exported against 121,810,453 linear feet valued at $3 331 022 during the same period of 1929

B. & H. Announces 400-foot Reel for 16 Millimeter

A NEW 400-foot reel for 16 mm film that entirely obviates the necessity of threading the hub slot, is announced by the Bell & Howell Company In this new instantaneous-threading reel the operator simply presses the film against the hub where it is securely held, ready either for projecting or rewinding There is no more fussing with the loose ends of the film The operation is extremely simple—push the film down on the hub, take up the slack, and go

Three other factors, in addition to the instantaneous-threading feature, are worthy of attention

A footage gauge on the face of both outside flanges tells at a glance just how much film the reel contains The gauge is graduated to indicate film lengths up to 400 feet in units of 50 feet

In order to prevent the placement of the reel on the projector in the wrong position and to eliminate the possibility of the projection of a reel that has not been rewound, the flanges of this new reel will have spindle holes round on one side and square on the other Consequently there only will be one way to run the reel—the right way

Also, to guard against the results of super-carelessness and super-roughness in handling reels of this type, the new reel will be made of aluminum heavier by one gauge than the reels heretofore used

B. & H. Announce Colored Block Letters for Kodacolor Titles

THE B & H Block Letter Titler Outfit proved so popular in white wood blocks for black and white movie work that the Bell & Howell Company conducted a series of experiments to ascertain the possibility of making Kodacolor titles with block letters in colors

As a result, the titler outfit may now be had with blocks in colors of red, green and blue, as well as white The blocks are available in complete solid color sets of 182 letters and 17 numerals in any one or all of the above colors

Unusual as were the effects produced with the white blocks, the possibilities of the new colored blocks for Kodacolor titling work are tremendously multiplied

Is the Great Mystery Solved?

WHAT does a positive electron do at 403.5 degrees centigrade below zero?

What does a negative electron do at 300 degrees centigrade below zero?

Will they continue to move in a circle of lead at these temperatures, after the current has been shut off?

What does a cat do when it listens?

When can an eagle hear best—at sunrise, at midday, or at sunset?

If you know the right answers to all of the foregoing questions you will know what some governments think about the new 'directional mike' now being developed by Bert Hodges for Western Sound Engineers

Spain to Make Own Pictures

A CONGRESS of Spanish and Latin American motion picture interests is now being prepared in Madrid Initiator and president of this event is one Don Jose Franco Rodriguez It is the aim of this congress to lay the foundations of a national Spanish motion picture industry The meeting in question is to establish a contact between Spanish and South American persons It is stated that the South American press is giving much attention to this venture

The Man on the Cover

A Few Facts About the Man Who Directed "Disraeli"

by **JOHN PARKER**

WHEN Film Daily announced recently that Alfred E Green had been named by the motion picture critics of the country as the best director of 1929 Californians did much rejoicing, for Green is one of the very few "Native Sons" who has made good in the picture business It seems that one must come from some distant state or country to click in this business, but Green has broken the jinx

Green piled up a tremendous vote among the critics and led his nearest competitors by thirty votes, which makes his victory rather complete Naturally, "Disraeli" had much to do with the vote, but it was not because of "Disraeli" alone that he won his honor There were "The Green Goddess," and "The Man from Blankleys" among his outstanding work

And, for 1930 this man Green has just completed another remarkable picture which will place him high among the leading directors, if indeed he doesn't win again It is "Old English," starring George Arliss, and if possible, it is an even finer picture than "Disraeli" Pre-viewers of this latest Warner Brothers opus call it the greatest character study ever limned by an actor on the screen, and a very finely directed picture

For so distinguished a director, Alfred E Green is one of the least known men in Hollywood, due chiefly to his own modesty and retiring disposition He has usually succeeded in distracting attention from himself for the benefit of his actors, but they have found him out at last Now everybody suddenly remembers that Green made many of Mary Pickford's and Colleen Moore's most successful silent pictures

It has been said of this director that he always subordinates himself to his players in order to achieve the proper results, but that it is his own masterful picture technique that is usually responsible for the success of the picture In the cases of 'Disraeli" and now "Old English," it was a happy combination of actor and director possessing a mutual understanding and a deep sympathy in viewpoint Both Green and Arliss are firm believers in the effectiveness of pantomime in the art of acting Instead of falling into the faults of most talking pictures—too much talk—"Disraeli" and "Old English" reveal the perfect blending of the component elements of expression—pantomime, voice and action In other words, the ideal picture—a motion picture that talks

It is significant to note that the most successful pictures made recently have been directed from a motion picture viewpoint Stage technique has been thrown out of the window, as it should be in making a motion picture For example 'All Quiet on the Western Front," directed by Lewis Milestone, primarily as a motion picture Such directors as Green and Milestone will lead pictures out of the wilderness of talk

Despite his comparative youth, Al Green is a veteran of the screen Born and raised right here in Los Angeles, Green grew up with Hollywood When he was barely out of short pants he was learning the business by playing extras, toting cameras and working as a studio jack-of-all-trades at the historical old Selig studio That was way back in 1912, and he directed his first picture with Kathlyn Williams four years later Then his rise was rapid He directed Mary Pickford in 'Little Lord Fauntleroy" and 'Through the Back Door' He directed the first picture Colleen Moore ever made as a leading lady, 'Come On Over," a delightful Irish comedy Then came several years under the Paramount banner directing Thomas Meighan in no less than five of that star's biggest hits Such as 'The Bachelor Daddy" 'Back Home and Broke' 'Our Leading Citizen,' Woman Proof" and 'Pied Piper Malone" And when little Colleen Moore became a big star it was Green who directed her in such pictures as "Sally," "Irene" and 'Ella Cinders"

"Like all great actors George Arliss is a finished pantomimist," says Green "He can convey as much with the lift of an eyebrow, the mere gesture of a hand—or, even with his back turned to the camera—as can the average actor who turns on all his powers He is probably the most thorough actor that has ever lived I get as much kick out of "Disraeli" being selected as the best picture of 1929, as I do out of my own good fortune, because it conclusively proves that the American public appreciates great art—as exemplified in Mr Arliss' performance—even more than it enjoys comedy and hokum"

M-R'S Growth

THE phenomenal growth of Mole-Richardson, Inc , designers and manufacturers of studio set lighting and electrical equipment, since its inception in 1927, is attributed mainly to the increasing use of incandescent lighting equipment, states Elmer Richardson, co-manager of the organization

Mr Richardson also states that their policy of unlimited, up-to-the-minute service to the studios has helped immeasurably in the growth of the company

"We keep men in the front line of picture producing, constantly watching and reporting every new development, every problem, pertaining to mechanical, lighting or electrical features, that is presented," says Richardson "We feel that this is absolutely necessary to keep pace with the rapid advancement of talking pictures, from the standpoint of mechanical units"

At present floor space of the Mole-Richardson plant amounts to 14,000 square feet Approximately fifty-seven skilled employees, including engineers, draftsmen, machinists, office and delivery force are now in the Mole-Richardson service

Photoplay Courses

SEVERAL important colleges are expected to institute courses in photoplay appreciation next year according to the Academy of M P Arts and Sciences Sixty students are now enrolled in such a course at the University of Iowa, where sound equipment has been installed and scenes from various films are being supplied by the Academy

Sound Shorts in Poland

THE 'Syrena Record' company of Warsaw, which owns the only existing Polish sound studio has recently started the production of sound shorts The first two reeler, which was released as an experiment, proved to be a great success, it is stated The studio is reported to be equipped with a Lignose-Breusing recording apparatus

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To users of the following process claim No 2, Dawley Patent, 1,278,117, application filed August 17, 1914, issued September 10, 1918, for Art of making Motion Pictures, which consists in effecting photographic images of a photograph, of a set or scene on the negative and in simultaneously effecting photographs of actors and properties supplementing the same, the images of the photograph being photographed at such a point in the field of view or range of the camera as to be relatively small and at the same time to properly merge with the larger field covered by the living actors, substantially as set forth.

Anyone skilled in the art of making motion pictures can readily see that the so-called Dunning Process, Pomeroy Process and Transparency Process uses all the steps of the above claim and are therefore infringers. We are diligently prosecuting Dunning Process, Inc., for an injunction accounting for all profits and advantages realized, either direct or indirect or from contributory infringment, and restraining order against its officers, directors, agents, attorneys, servants, employees, associates and confederates and each and every one of them from directly or indirectly and fully or contributorily infringing upon said letter patent, 1,278,117

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